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CONTENTS ON COVER PAGE 3

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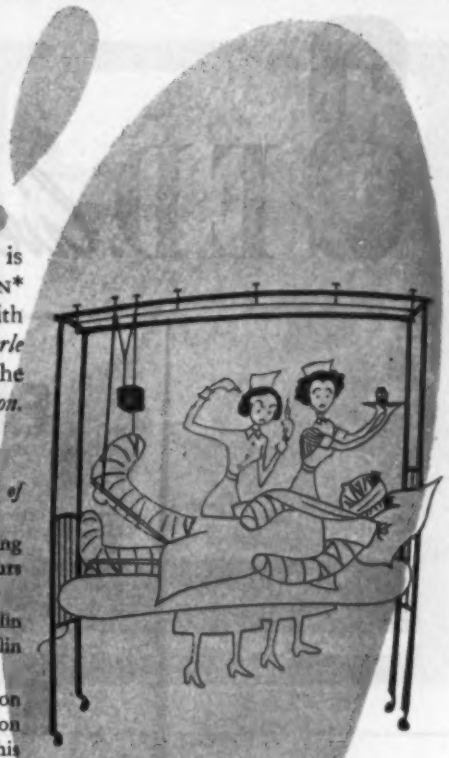

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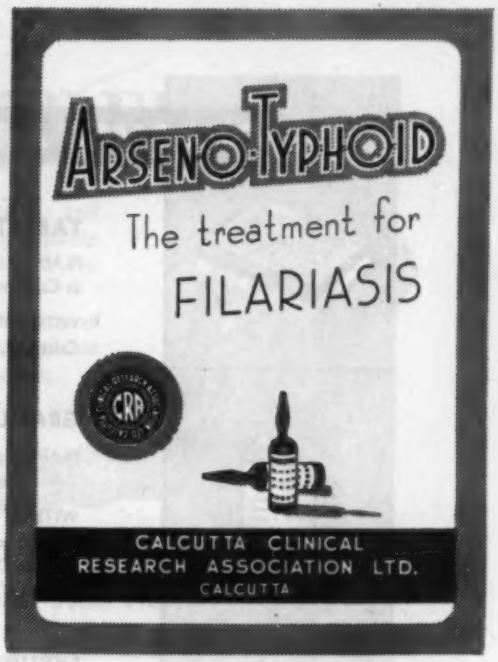

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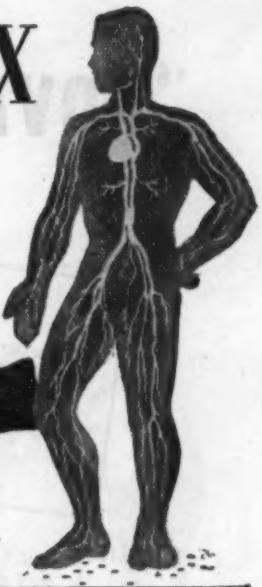

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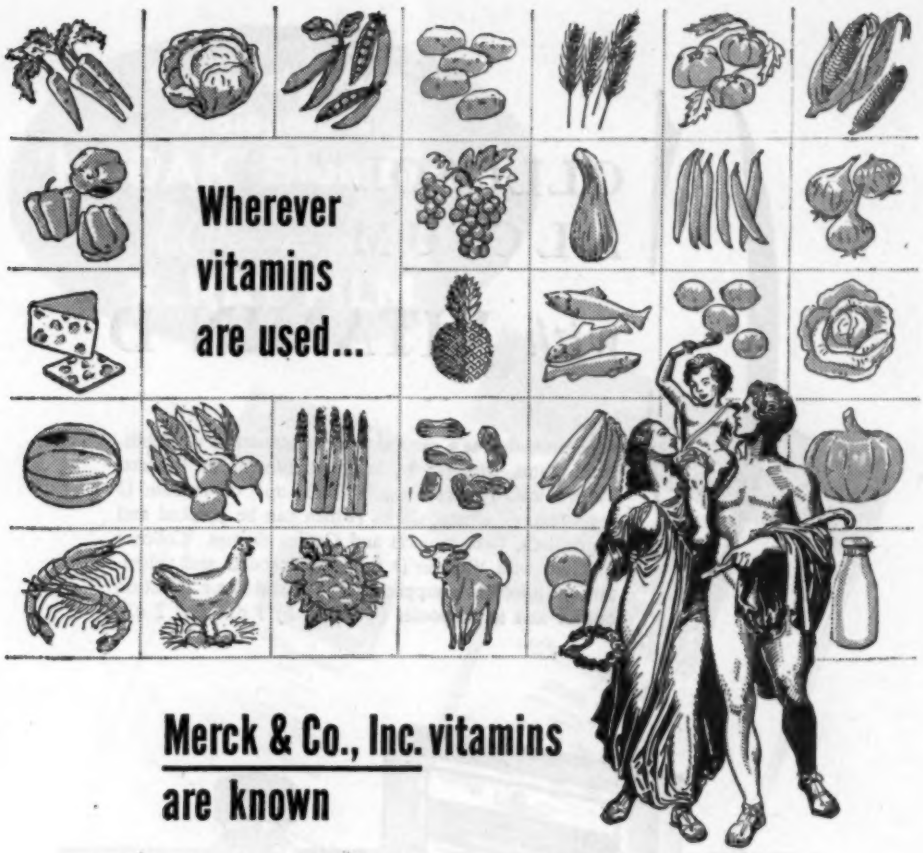

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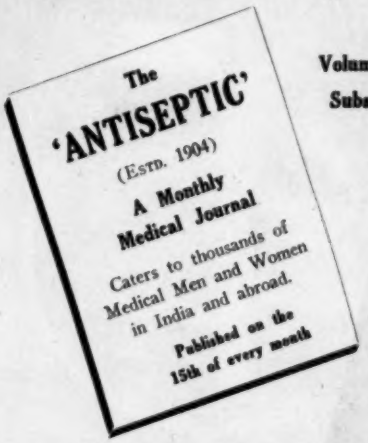

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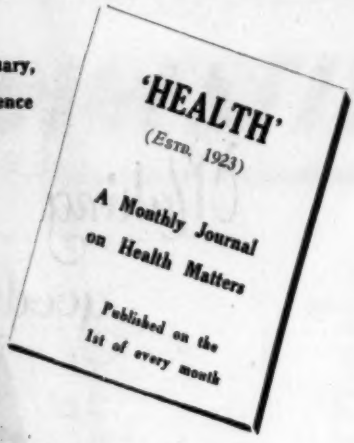

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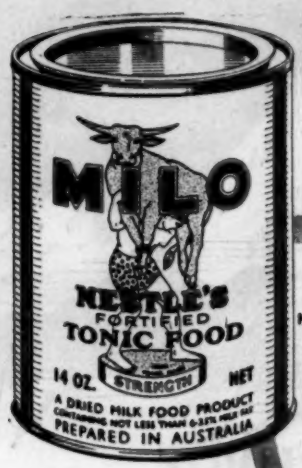

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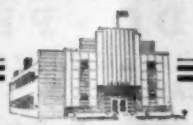

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POLIOMYELITIS IN BOMBAY*

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Though poliomyelitis has been in Bombay for many years, last year it suddenly sprang into prominence partly because it assumed an epidemic form but more because of the propaganda that was carried on in the lay press by certain persons who were interested in this condition. This propaganda attracted an All-India notice, so much so, that the Government of India brought out a team from America in the early part of this year to study the prevalence of this disease in India and suggest ways and means for its prevention and management. The team has already submitted its report to the Government which, however, is not yet published.

Poliomyelitis is an infection that is prevalent all over India. In Bombay, though there are sporadic cases throughout the whole year, the incidence begins to rise in June and reaches its peak in the months of August and September, and declines in October. Unfortunately poliomyelitis was not a notifiable disease in Bombay till a couple of years back. Hence figures are not available for the previous years. The following figures have been supplied by Dr Choksey, the Health Officer, Bombay Municipality to whom I am very thankful.

	Jan.	*Feb.*	*Mar.*	*April*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Total*
1949	2	—	5	2	11	16	103	151	60	26	8	5	389
1950	6	9	3	4	3	11	23	38	9	16	1	—	123

These are the total number of cases. Of these in 1949, 63 cases and in 1950, 7 cases were reported by the medical practitioners. We all know that information about all cases of notifiable diseases does not reach the health authorities. Further our concept of poliomyelitis is now widened to embrace the non-paralytic types, hence the actual incidence of the infection should be corrected for non-reporting and then further multiplied to include the non-paralytic group. If this is accepted this will give us a figure of about 3000 cases for 1949 and 1000 cases for 1950. The rationing population for Bombay proper for 1948 was 2,740,933 of which 10 lacs could be estimated to be children.

It is my impression that poliomyelitis assumes a virulent epidemic form once in 10 years. There was a heavy epidemic in 1938 and we had one last year. Though many expected this year an epidemic of the same magnitude as last year, yet it has not been so as the above figures show.

INCIDENCE

Poliomyelitis has for many years been considered a disease of childhood, though in recent years in Europe and America the age level for highest morbidity has been rising. This paper is based on material obtained from children only and the incidence has been as follows:—

Age in months			HOSPITAL *1949*	HOSPITAL *1950*	HEALTH OFFICE *1949*	HEALTH OFFICE *1950*
0 — 3		..	3	5	149	31
4 — 6		..	5			
7 — 12		..	35	20		
13 — 24		..	32	31	108	35
25 — 60		..	40	30	90	44
61 — 120		..	7	5	25	13
121 +		..	0	1	21	—
	TOTAL	..	122	92	393	123

Number of Cases—This table shows that in Bombay the infants are most susceptible to the paralytic type of poliomyelitis and the morbidity declines rapidly after the age of five years. From conversation with my colleagues, I have gained the impression that paralytic poliomyelitis amongst adolescents and adults is uncommon.

Sex—In 1949, 282 males and 157 females were infected. This year of the 92 admitted into hospital 51 were boys, and 41 were girls.

CLINICAL PICTURE

The clinical picture unfolds in three stages. The first, the prodromal, when there is cold, fever, malaise. This is followed by a period of silence of variable duration. Then there is a chain of signs and symptoms before the paralysis sets in. These pertain to the in-

*Read on the 27th All-India Medical Conference, held at Sholapur, December, 1950.

fection—fever; to the respiratory system—cold, cough; to the alimentary system—vomiting, diarrhœa; to the autonomic control of the intestines and bladder—diarrhœa, constipation and retention of urine; to the central nervous system—vomiting, drowsiness, pain and spasm in the muscles, unconsciousness, convulsions. One or more of these may be present in each case. In our patients all of whom entered the paralytic stage the above symptoms were observed as follows:—

Symptom	*1949*	*1950 Total 69*
Fever	49	64
Fever, cold, cough	34	21
Diarrhœa	3	6
Constipation	9	15
Vomiting	3	10
Pain	8	14
Spasm	21	15
Drowsiness	14	4
Convulsions	6	3

In both these years the incidence of constipation diarrhœa and retention of urine has not been high.

American clinicians have estimated that of all persons infected by the virus, eighty per cent do not progress beyond this stage. Hence for one paralytic child there are four others who are also infected. Of these four, some at least must be in the family, and this is what they have found. But it is strange to say that this finding has been exceptional in my experience. Questioning the parents of the children in hospital or in private practice has very rarely brought forth a positive answer. This year there were only four positive histories. It is true that our patients give a poor history, but all could not be having such a poor memory.

Children sought admission to the hospital when they had paralysis though a few came in the early stage of paresis. The distribution of paralysis was as follows:

	1949	*1950 Total 69*
Oculomotor	2	2
Facial	37	16
Bulbar	12	14
Neck	29	24
Back	20	3
Abdominal wall	6	5
Extremities: upper one	21	8
both	13	3
Lower Extremities: one	38	19
both	38	14
Quadriplegia	—	4
Hemiplegia	—	6
Intercostals	—	2

The paralysis varied from facial paralysis, monoplegia, to a combination which involved the face, neck, palate, and extremities. In both the years the lower extremities were affected most often. The high incidence of facial paralysis during these two years is another feature. The bulbar cases include those with a temporary paresis of the palate, slight hoarseness of voice, as well as those with extensive paralysis.

The distribution of the paralysis was used by Toomey as an argument to support this theory of the route of entry through the ends of the non-medullated nerve fibres in the intestines or oropharynx. But histologically the changes in the central nervous system are widespread and certain areas like formatio reticularis, anterior horn cells in the spinal cord always exhibit damaged cells. It is the severity of the damage that determines the paralysis or paresis and the early, or late complete recovery or residual state. Though there were deaths in this series, yet autopsies were not available. Hence I am not in a position to place before you these reports to correlate the physical signs.

Besides the physical signs and symptoms the only other clue to the condition of the central nervous system is the cerebrospinal fluid. But this is a poor guide. Practically all our cases came in with paralysis and in them in the fluid collected soon after admission the count rarely exceeded 50 lymphocytes and the protein above 40 mg. per cent. This minimal change in the C.S.F. has been observed by clinicians in other parts of the world. The C.S.F. was examined in nearly all cases, sometimes repeatedly. The changes in the cerebrospinal fluid were most minimal as per table.

	Cells						*Protein*	
	0-5	6-10	11-20	21-50	51-100	100 +	Normal	Increased
1949	80	12	5	3	2	—	65	36
1950	15	31	16	10	8	6		

The findings according to the day of the disease are analysed in the following table:—

Day	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	21
No. of case	1	1	5	4	3	4	5	3	2	4	2	3	2	3	3	1	1	—	—	3
No. cells av. ..	15	14	10	30	65	30	10	43	10	20	8	5	50	17	15	7	4	—	—	17

Diagnosis

The diagnosis of poliomyelitis has to be suspected in the preparalytic stage and confirmed in the paralytic stage. The suspicion is liable to be wild and all-embracing during an epidemic—a cold, malaise, fever, body pains, constipation, diarrhoea, a little pain in the limbs, vomiting may all be considered to be manifestation of preparalytic stage of poliomyelitis. They may be or may not be; one cannot contradict a diagnosis. Where the parents are apprehensive it is wiser to order for the suspected patient complete rest in bed. We have no facilities for examining the stool of such patients for the virus. Even if they are established in the near future the cost will be beyond the means of many.

The C.S.F. at this stage may be helpful if some definite change is found; at least one can say "well, here there has been an infection." In the paralytic stage diagnosis is definite at least in the spinal type. But in the encephalitic type it is sometimes difficult. Tubercular meningitis so often simulates the picture of encephalitis that one cannot make up one's mind for some time. The C.S.F. findings are indefinite or change daily.

The other auxiliary guides like radiological findings, Levinson's sign etc., may not be there. In the absence of a clear picture, treatment becomes confused and excessive. Later perhaps the diagnosis unfolds itself, but it is not a particularly pleasing situation.

Difficulty also arises when paralysis follows diphtheria. Two cases which defeated me are fresh in my mind. They gave a history of diphtheria (?) treated with penicillin; a fortnight later they developed regurgitation of fluids through nose, incoordination, swaying gait. They were treated with large doses of vitamin B_1. But they got steadily worse; within another fortnight they died of bulbar paralysis, with failure of respiratory muscles and diaphragm. They did not have any fever the second time.

I have not diagnosed a case of Guillan Barré syndrome as yet, though some say they have seen a good number.

The diagnosis between scurvy and poliomyelitis may also be difficult when both coexist in the same patient. The gums may bleed, pain may be exquisite and voluntary movements may be possible, though limited, the cerebrospinal fluid may not show any change or unfortunately be blood-stained and the bones may show a scorbutic lattice. Here the therapeutic test is a guide, though at times one's confidence gets shaken.

Treatment

1. *Rest:*—When a diagnosis was made, or suspected, the patient was put to bed with the paralysed limb in physiological rest. Splints were not used but the limbs were supported by bolsters and pillows and foot-boards. We were always very far from the ideal of physiological rest as the mothers in the hospital who are very ignorant did not appreciate the value of this part of treatment. Strapping of face muscles was tried in older children but it was not successful as the straps were quickly removed. The value of rest is accepted by all therapists and one cannot impress on the parents too much any day the necessity for complete rest in the early stages. The parents are very restive and itching to inspect and demonstrate the progress made by the child daily

2. *Fomentations:*—Next to rest, warmth affords relief for the pain and the spasm. Wet fomentations were ordered for ½ hour every four hours. These were carried out by the application of flannels rinsed out of warm water. Though this disturbed the child, particularly a timid or fretful one, the relief obtained was appreciated very soon by the children. The mothers were taught how to apply the fomentations. The alleviation of pain was further sought by the administration of a combination of aspirin, codeine and phenacetin orally.

3. *Antispasmodics:*—When spasm was present, prostigmin was used to relieve this condition. It was given orally every four hours, the dose varying from 3 mg. to 7·5 mg. This was continued for about a fortnight.

4. Passive movements were started even in the acute stage. They did not exceed five movements of each group of muscles twice a day at the start, and were increased gradually.

5. *Active movements:*—As the power returned the child was urged to co-operate actively in the passive movements and gradually transform them into active movements with the increase in power. It has been extremely difficult to restrain the movements of the little children with the return of power. It has also been difficult to impress on the mothers the need to keep the child at rest.

6. *Cerebrospinal Fluid:*—This was collected on admission for purposes of diagnosis, and on subsequent occasions for purposes of study. Regular drainage of the fluid was not in the outline of therapy, nor was it indicated.

7. *Bowel Wash:*—This was ordered daily for 8 days. The reason for this item in the therapy was the desire to clear the intestines of the virus. Potassium permanganate or soap water was used.

8. For the fever and cold the powders containing aspirin, codeine and phenacetin provided adequate symptomatic relief. Very few had fever after admission into hospital.

9. *Specific Therapy:*—So far no therapy has been found to have a specific action on the virus that has

already entered the central nervous system and damaged the cells.

Convalescent serum therapy which was extensively used till a little after the thirties, is now considered to be without real value and is not employed to-day.

Experimentally it has been found that nucleic acid, glutamic acid have an action on the virus. Last year, a Bombay firm, gave us a nucleic acid compound for trial, but the injection of this compound did not affect the course.

Bhatnagar and Fernandes offered us a formaldehyde derivative of 2-p-amino-benzenesulphanilamide-thiazole which from their experimental data they concluded had a chemotherapeutic activity which was related to its property of tissue localisation, rather than to its concentration in extracellular fluid. As in poliomyelitis the host-parasite relationship is an intracellular phenomenon it was suggested that this compound may exert an inhibitory action on the virus and help the recovery of the cell. The bulbar cases to whom this preparation was given showed no response. In the spinal cases some showed no response, In the spinal cases some showed improvement. Of course, it is difficult to assess the value of any therapeutic agent in this disease where the recovery both in its spontaneity and speed is so variable. This preparation should be further tried where a larger number of patients and a better team of workers are available.

Bulbar Poliomyelitis

This is the dreaded type. Fortunately it is less common. The cases are divided into two groups—the upper, from the I to the VIII nerve, and the lower from the IX to the XII.

In the upper group the seventh nerve is affected more often, then comes the sixth and the oculomotor. Affection of this group does not carry a bad prognosis, if the infection limits itself to this group.

The affection of the lower group is more serious as it carries a high mortality rate. The death is due to anoxia, because the pathway for the oxygen is obstructed by the accumulated secretions, and secondly to aspiration pneumonia.

Bulbar paralysis must be distinguished from paralysis of respiratory muscles. Signs of bulbar paralysis may be as mild as a hoarse voice or slight irregularity of movements of the halves of the soft palate. Gurgling, collection of frothy saliva in the mouth and pharynx, difficulty or inability to swallow with regurgitation of fluids through the nose, laryngeal stridor, hoarse voice, whispering voice, cyanosis, fast feeble pulse, moist sounds in the lungs, and drowsiness form the clinical picture in the serious case. In 1949 there were 12 cases and in 1950, 6 cases of this type. The clinical picture progresses rapidly and generally to a fatal termination.

The principles of treatment are (1) to clear the aerial pathway to maintain an adequate supply of oxygen and (2) to prevent aspiration of foreign matter into the lungs.

To clear the aerial pathway, raise the foot of the bed at least one foot above the level of the head and it may be necessary to raise it much higher Let the child be made to sleep on the side. Aspirate the secretions, from the mouth and pharynx by means of a rubber or preferably a metal catheter. This must be first placed between the gums and the cheek and then on the back of the tongue. Retching must be scrupulously avoided.

Oxygen must be given continuously through a nasal catheter. It must be previously warmed by passing it through hot water in a Woulfe's bottle. As most of us have to use oxygen apparatus without metres, the volume of oxygen administered has to be gauged by the bubbles in the Woulfe's bottle. These must be uncountable for adequate oxygen therapy. Oxygen therapy may sometimes embarrass the child more.

If the two procedures do not clear the airway adequately tracheotomy has to be considered. There are differences of opinion as to its indication, which is after all a matter of individual judgment. But when the secretions are plentiful in the pharynx and their removal is difficult, when there is a stridor, and particularly when there is choking, cyanosis and the child shows signs of exhaustion, there should be no hesitation in performing a tracheotomy.

When the secretions are plentiful in the throat and lungs one must fight the temptation to administer atropine to dry up the secretions because it is difficult for the child to bring up viscid mucus.

When the secretions are plentiful in the throat and swallowing is difficult it is advisable in the very acute phase to administer fluid only intravenously. For this solutions of glucose, preparations of protein hydrolysates can be utilised With an improvement in the condition feeding may be done by gavage and extreme caution should be exercised to see that it is done correctly.

Bulbar paralysis is not an indication to put the child into an iron lung. It is only when the muscles of respiration—the intercostals and the diaphragm, and the accessory muscles are involved that a respirator or iron lung should be used.

The existence of an effort to breathe, and sleeplessness are indications for a respirator. At this stage it may be possible to take the child out of the respirator at intervals for fairly long periods. As the condition deteriorates the patient is disinclined to talk and finds difficulty in counting. He may not be able to count beyond four with a single breath. Then there is no time to lose in placing him inside the respirator. This test is difficult to carry out in young children who often are not cooperative in normal times and more so when in a state of acute illness. The respirator is periodically stopped and this period outside the respirator is gradually increased according to the condition of the patient when he is out of it.

INTRAVENOUS USE OF GREEN COCONUT WATER IN PEDIATRIC PRACTICE

A Preliminary Report

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In a previous communication (Mojumdar, 1950), I promised to publish the results of work done in our hospital with coconut water. In this paper, I present a preliminary report of the work that is now being carried on in my department.

Pradera, Fernandez and Calderin (1942) were the first to think of the possibility of intravenous injection of green coconut water. They have shown that in experimental animals and in human beings, the water is quite safe and as it does not contain complex protein molecules, it does not produce any anaphylactic shock. They administered coconut water in amount ranging from 250 c.c. to 500 c.c. in 12 patients, who were hospitalised "for various causes who did not have a disorder of acid-base metabolism or manifestations of systemic disturbance when they were given the injections." Very little reactions occurred in these cases. As their idea was to find out whether it is safe to administer coconut water by venoclysis they concluded, that "to determine in which cases this should be done and what benefits may be derived from the injection would require a thorough study." Our aim is to provide the right indications of administration of green coconut water.

In a few samples that were examined it was found that the specific gravity of the water lies between 1020 to 1022, protein 28 mgm per 100 c.c., sugar 200 mgm per 100 c.c. From the analysis published by Pradera *et al* (*loc. cit.*) coconut water is a good source of electrolytes and essential amino acids. So it was thought that it might be of use in nutritional oedema. I used coconut water in a case of nutritional oedema with gratifying results, the details of which are reported below. To my knowledge, no other person, except Pradera *et al* has used green coconut water for intravenous infusion.

Case Report

Tuku, aged 2 years, the seventh of seven children was admitted in hospital on 21st June, 1940 for the following:—

1. Chronic diarrhoea for six months—three to four loose motions a day containing mucus and undigested food materials.

2. Oedema of the whole body for fifteen days.

3. Ulcers on dermatitis all over the body—the rashes started as minute eruptions resembling sudaminal rashes, skin over which broke down and serous exudates started discharging. The dermatitis was associated with intense itching. This was followed by peeling off of skin of the whole body. In parts, especially on the back the dermatitis was of pellagroid type.

On examination: The child was found to be a bloated up child, œdema specially marked in the lower limbs. Pulse 108 per minute, respiration 28 per minute.

Heart—apical impulse at the fourth space just inside the nipple line.

Lungs—nothing abnormal was detected.

Spleen was not palpable. Liver was palpable ¾" below the costal margin. The patient was conscious and nothing abnormal was detected in other systems.

Blood (on 22-6-50) Hb 52 per cent (Sahli), r.b.c. 3,590,000 per cmm., w.b.c. 15,800 per cmm., poly 66 per cent., lympho 34 per cent.

Blood Proteins (on 28-6-50)—Albumen 2 per cent, globulin 1·74 per cent, fibrinogen 0·26 per cent.

Progress of the case—The skin of the patient was so bad that no intravenous therapy was possible, so our aim of treatment was first of all to bring back the skin to its normal state. As the patient was not vomiting, the chief treatment of oedema was instituted through oral feeding. Pelonin 50 mgm. tablets were given twice a day. Olive oil with one per cent sulphathiazole in it was applied all over the body and sulphathiazole by mouth in the dosage of one tablet immediately and half tablet every four hours were instituted. Intramuscular injection of vitamin B-complex was started in 2 c.c. dosage every day for three days and then it was reduced to one c.c. daily.

On 29-6-50, the skin became almost normal and the general condition of the patient became much better but oedema remained the same. It was then decided to give the patient an intravenous infusion of green coconut water. A fragility test with the r.b.c. of the patient was done with the green coconut water and the water was found to be isotonic, no r.b.c. being hæmolysed.

On the day of transfusion, one half tablet of an antihistaminic drug was given at 12·30 P.M. 100 c.c. of water was drawn from a green coconut with all aseptic precautions and an infusion was started by a slow drip method (8 to 10 drops per minute)*. At 4 P.M. another one half tablet of an antihistaminic drug was administered. Temperature rose to 102°F at 3 P.M. and went down to normal at 8 P.M. No untoward symptom occurred. The amount of urine as measured by the number of soiled bedsheets, was increased. Unfortunately, due to lack of co-operation on the part of the patient and the paucity of nursing staff, an accurate measure of the quantity of urine passed could not be kept. By the fifth day of infusion

* Pradera *et al* administered the water at the rate of 30 to 40 drops per minute for a period ranging from 3-6 hours.

the oedema completely disappeared though the weight lagged behind by about 48 hours. The following table gives the change in weight of the patient.

Date	*Day of Infusion*	*Weight*
29-6-50	1	19lb. 14¼ oz.
30-6-50	2	19lb. 6½ oz.
1-7-50	3	20lb. 8 oz.
2-7-50	4	20lb. 11¼ oz.
4-7-50	6	20lb. 1¾ oz.
5-7-50	7	19lb. 1¾ oz.
6-7-50	8	18lb. 7 oz.
7-7-50	9	18lb. 1½ oz.

Diet is naturally an important factor in the treatment of these cases. As usual the patient was having high protein diet before the experiment, which consisted of cheese, boiled fish, rice, dal, vegetables and milk. To obviate any effect of diet on the course of oedema the diet was kept constant for the period of experiment, which consisted of whole milk 6 oz., dab (green coconut) water 2 oz., four times a day; pulp of one slice of bread; dahi 4 oz.

Discussion

It will be seen that for the first few days the weight of the child increased, inspite of the fact that there was an actual diuresis. The same phenomenon has been observed by us when we transfused plasma in these cases. For the first few days (generally 3-4 days) the oedema increases and then starts subsiding till the patient loses all the extra fluid. The same thing happened in this case also. The amount of green coconut water transfused was only 100 c.c. and it was really a useful observation that only 5 c.c. per pound of body weight was sufficient for the cure of the child. It will be seen that we waited for eight days before we started this treatment, when we gave extra ration of protein in the diet, in the form of cheese and fish, all of which were cut off with the infusion of water, so that the result obtained is absolutely due to green coconut only. It is a matter of great satisfaction that there was no untoward reaction at all except a transient rise in temperature.

The gratifying results shown in this experiment have emboldened us to carry on further work with green coconut water which is now in progress.

Acknowledgment

My thanks are due to Dr. D. N. Chatterjee, M.B., the Resident Physician, Chittaranjan Sishu-Sadan (Children's Hospital), who actually carried on the infusion under my supervision and Dr. (Miss) S. Sarkar, M.B., my house physician, who kept the day to day observation notes.

References

Pradera, E. S., Fernandez, E. and Calderin, O.—*Am. J. Dis. Child.*, **64**: 977 (Dec.), 1942.

Mojumdar, N. G.—*J. Indian M. A.*, Oct. 50 (Special Issue), p. 31.

SURGICAL CAMPS

B. N. SHARMA, F.V.A.S.

Chief Surgeon, General Hospital, Udaipur, Rajasthan.

India is a vast country with 80 per cent of the people living in villages where facilities of modern medical aid are not up to the mark and there are also communication difficulties which do not make it easy for villagers and particularly the sick to reach the cities for medical help.

In these circumstances if medical aid centres could be organised in rural areas, it would be a boon for these poor folks in the remote corners of the country, Dr. Mathuradas of Mogha (Punjab Province) was the first to organise camps in rural areas for eye operations. The usual operations of cataract, iridectomies and eyelids were performed from time to time. Later on some more enthusiastic workers came forward and organised camps. Now every year thousands of eye operations are being performed in such camps. The results obtained have been very encouraging and the camps have become very popular in our country. One can easily imagine that under such conditions the surgeon has to depend much on his own ingenuity and local resources and has got to forget for the time being the lavish equipment, expert assistance and the atmosphere of a modern operation theatre.

During my inspection tour of the village small Dispensaries (Ambulatoria) I used to meet lots of sick people who required all sorts of operations. I had nothing else to offer to them except advice that they should come to my hospital at Udaipur, but shortly afterwards I realised that it was not easy for them to reach the city on account of lack of communication facilities. They could not do anything else but suffer. For instance, a hernia case will put up with his suffering till he gets strangulation when either he is carried to a hospital or succumbs to the disease. Similarly, a vesical stone or appendicitis case would suffer until either he is relieved of the suffering or the suffering relieves him of his earthly existence.

I was much moved by the suffering of our people and I thought over this problem as how to carry the medical aid to the villages. I wanted to make an experiment in this direction and see if day-to-day operations of general surgery could be conducted under rural conditions on a similar basis as was already in vogue for eye operations in our country. I made a humble beginning on the occasion of my inspection tour of one of the village dispensaries. I performed a few operations for piles, fistulæ in ano, vesical stones and hernia in one of these village dispensaries. I carried with me a folding table, a kerosene stove, one torch lamp, a sterilizer and some surgical instruments. The experiment was small but it did not disappoint me.

One day some friends came to see me and casually discussed if a camp for piles operation could be undertaken by me for the village folk. I told them that it was worthwhile doing so and I wanted also to operate on cases of hernia and vesical stones besides piles, fistula in ano and other minor operations.

In 1946 the first surgical camp in the true sense was organised by the above friends and their team of associates. I carried with me some surgical instruments, portable steam sterilizer, instrument sterilizer, few dressing drums, kerosene stoves, two folding operation tables and hand-battery lights. The surgical camps, can be held at the time of the year when the climate is moderate. It is not possible to do so during too cold or too hot months of the year. But when the climate is moderate there is also the big nuisance of flies. This we succeeded to manage with Flit-spray pumps and screens. Net screens are very useful for this purpose.

I worked for 10 days and performed about 150 operations. Most of the operations were done for piles, fistula in ano, vesical stones, hernia and few cases of uterine fibroids and ovarian cysts were also done. The results were unexpectedly good and encouraging. The work was appreciated by the people and they insisted that this sort of humanitarian work should be organised every year.

In 1947 another surgical camp was held and about 300 operations were performed in about 15 days.

The organisers, workers and doctors enriched and encouraged by the experience of the previous two camps were emboldened to organise the Surgical Camp in the year 1948 on a bigger scale and widen their scope of work to cover as much field of surgery as was feasible without much specialised technical laboratory and x-ray aid.

In 1948 the surgical camp was in operation for 3 weeks and about 500 operations were performed. Besides ohe usual operations for hernia, piles, fistula in ano, osteomyelitis, small tumours of soft parts, vesical stones and tonsillectomies, operations were performed for renal stones in five cases, iliocolostomies in two cases of tuberculosis of cæcum, 3 cases of goitre, several cases of mastoid, 20 cases of uterine fibroids, few cases of complete prolapse of uterus and some cases of ventral suspension of uterus.

In September, 1949 another surgical camp was held which was a further improvement on that of 1948. Every year's experience has led to better organisation and widen the scope of surgical work. The following operations besides the minor and uterine curettage operations were performed at this time. The total number of operations was 580 including minor work.

The following table shows the number and the type of operations that were performed:

TABLE SHOWING THE APPROXIMATE NUMBER AND THE TYPE OF OPERATIONS UNDERTAKEN

Appendectomies	60	cases approximately.
Herniorrhaphies	74	„ „
Piles (Hæmorrhoids)	100	„ „
Fistulæ in ano	40	„ „
(Vesical stone) Suprapubic Cystostomies	14	„ „
Tonsillectomies	20	„ „
Mastoidectomies	30	„ „
Hysterectomies (Fibroid uterus)	20	„ „
Vag. Hysterectomies (complete prolapse uterus)	10	„ „
Ovarectomies (Ovarian cysts)	6	„ „
Ant. and post. Colporrhaphy	8	„ „
Gilliam (Ventral suspension)	20	„ „
Salpingectomy (for Sterility)	6	„ „
Iliocaecostomies in T. B. Caecum	3	„ „
Thyroidectomies (Goitre)	4	„ „
Prostatectomies	2	„ „
Nephrolithotomies	4	„ „
Gastrectomy with Gastro-jejunostomy (Billroth II, with Finsterer's modification)	1 case	
Cholecystectomy	2 cases	
Congenital absence of Vagina	1 case	

SPECIAL FEATURES AND RESULTS OF THESE SURGICAL CAMPS

The best season for these camps is from September to beginning of November and from March to end of April, when it is neither too cold nor too hot or raining. In winter it is difficult for the poor people to carry heavy beddings. And it is very expensive for the camp organisers to provide winter bedding to every patient and his poor attendants. During summer and rainy months it is quite obvious that camp operations cannot be undertaken.

The post-operative complications of pneumonia, hypostatic congestion and bronchitis are much commoner in winter months than at other times, when the weather is moderate. The nuisance of flies must be avoided by flit-spray pumps and wire netting. This could be successfully done in the last two years—1948 and 1949.

The ordinary wooden cots woven with jute strings, commonly used in villages with a cheap durrie covering and linen sheets were found sufficient to suit the purpose. Wooden back-rests were used to help the patients to sit up. The luxury of Fowler's bed was unknown in the camps and no set-back in the results was experienced for want of them, rather better results were seen as will shortly be discussed.

The unpleasant experience of a few cases in 1948 (3-4) showing tetanus infection within 3-4 days after

the operation and of two cases in 1949 made us reflect over our work and to find out how best this could be avoided.

It is certain that the infection is not carried through the instruments because the incubation period for tetanus is 8-12 days and in all these cases the infection was manifest within 3-4 days after the operation. All the cases who got this infection had raw wounds exposed to dust and dirt and had been using the various indigenous preparations in the most unhygienic manner. One old woman had complete prolapse of uterus which had an eroded surface and it was covered with dirty rags; another woman had a big ulcerated carcinoma breast. It is important to note that those who got this infection had exposed wounds of the skin. I believe that these cases were harbouring infection and were operated during the incubation period. During this year (1949 September) we administered in all such cases with dirty and exposed wounds anti-tetanus serum and hope that in future such incidence would be avoided. It would be better if immunised sera could be used.

It is an astonishing fact that the post-operative complications of hypostatic congestion, pneumonia and bronchitis are much less in the camp cases than in the hospital patients.

In the hospital patients I have observed that these post-operative complications are less frequent in private-room patients than in general-ward patients. It may be attributed to two causes. Firstly the chances of cross infection in general wards are much greater than in private ward patients and secondly the poorer class of patients who are usually admitted in the general wards commonly suffer from bronchitis which is quite a common feature in our country. May be that it is due to dust. The question is how to explain the lesser incidence of post-operative lung complications in camp cases as compared to hospital cases. I believe that that part of nursing which forces the patients to be strictly confined on their backs and do not permit them to turn on the sides and does not encourage them to sit up early is lacking in the camps and results in fortune in disguise. It is my firm conviction that the system of confining the patient to Fowler's position and several days after the operation is detrimental to his early progress and hampers his recovery which could be quite uneventful provided that he is encouraged to turn on his sides from the first day of the operation, to sit up the next day with the back rest; may be that is done at first for few minutes at a time but as frequently as is compatible with the patient's strength. I have seen that since the patients have been encouraged to turn on sides and to sit up early, these complications are becoming quite uncommon. It has been commonly observed that strong well-built man after hernia operation if confined on his back gets lung complications while another patient comparatively less strong has an uneventful recovery. A weak and too ill a patient is an exception to this routine. It has been found quite helpful to encourage patients to inflate small football bladders which provide a good lung-expansion exercise and helps in preventing lung complications.

All cases get quinine injection before operation in order to prevent post-operative flare up of latent malaria.

The skin toilet before operation is very important and more so in village class patients, whose skin has more dirt and dust as a result of their living condition and occupation. Thorough cleaning with soap and water, turpentine and spiritus and application of tincture iodine is very important and should be supervised from time to time.

All wounds are dusted with sulfonamide powder before being closed. All wounds in patients with a liberal subcutaneous fat are drained with corrugated rubber or rubber tubes.

I seldom use caugut. I use silk for intestinal sutures and linen thread for peritoneal, muscular and fascial layers and skin. I was using linen thread for subcutaneous tissue sutures but found that it led to pinhole sinuses and until the thread was either removed or cast off by nature the sinus would not heal. For the last one year and in the surgical camp of 1949 the subcutaneous sutures of thread were not used and there were no cases of these skin-deep pinhole sinuses. I never use silk or thread if there is already infection in the wound or in cases where the depth of the wounds are drained for pus or any septic discharge. I use catgut in such cases.

It would be ideal if a mixture of sulfonamide and penicillin powder could be used in surgery and I hope in due course of time, it would be cheap enough for being employed as a routine measure in all aseptic operations.*

On the basis of the foregoing experience and routine of pre-operative and post-operative cases, the primary healing in all aseptic cases is about 98 per cent. In cases where a drainage tube is kept there is little serous discharge for a few days which stops by itself and the period of healing of the wound is not prolonged.

It need not be emphasised that it is imperative to maintain the water balance of the body. Even in camp surgery, the administration of glucose saline was routinely carried out. The surgery where blood-transfusion is required has not been undertaken in these camps and I believe it should not be.

The results of this camp of 1948 have been very gratifying. There were two deaths in 580 operated cases which included major and minor operations. Many failures and flaws of the previous camps were remedied and a definite line of work has been established.

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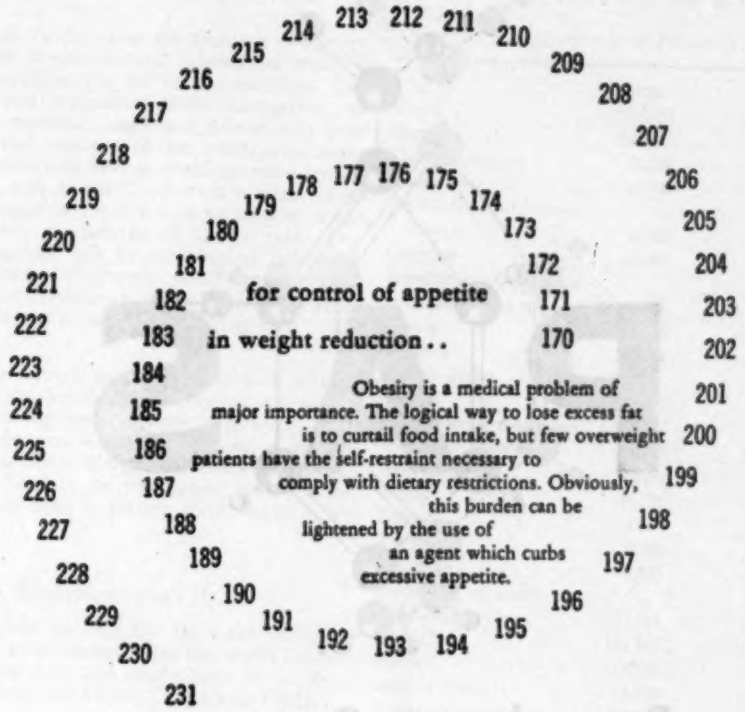
* Such a powder is now available in the market—Ed., *J. Indian M.A.*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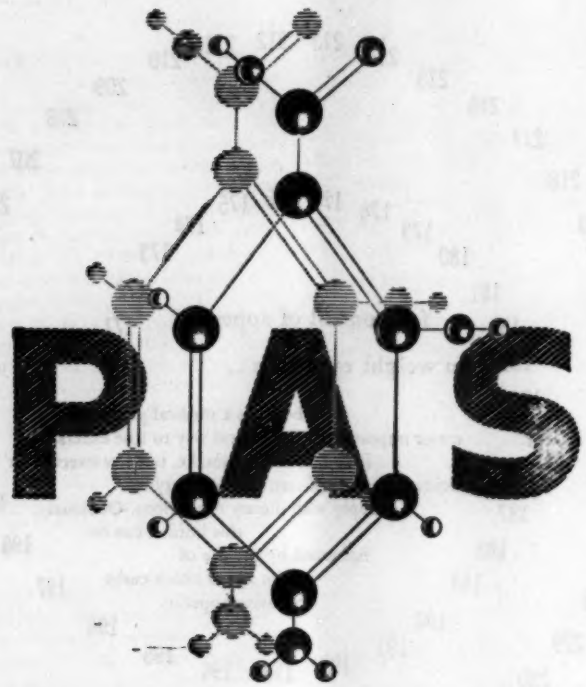

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POPULATION PROBLEM OF INDIA

S. N. SANYAL, B.SC., M.B.

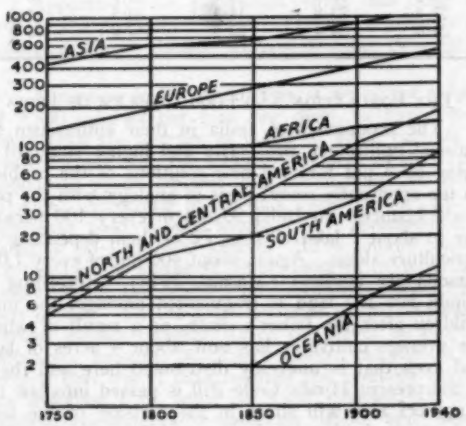
Calcutta Bacteriological Institute, Calcutta.

India is free to-day from the bondage of slavery but the bondage of poverty and sub-normal standard of living still remains the lot of the common man. Inspite of our vast natural resources, man-power and reserve of raw materials, ours is a proverbially poor country. The vast majority of our countrymen never get a proper measure of food or clothing; some remain ever half-naked, and do not know what a square meal means. This inglorious reality is a monument of the apathy and neglect of centuries of foreign rule. Our newly found freedom will be meaningless unless we tackle the problem of poverty whole-heartedly and without further procrastination, to build up a new India on the basis of sound economics and prosperity.

But any one who faces this problem will be confronted with the Frankenstein of unchecked increase of population obstructing every attempt at solution. The realisation that an ever-increasing number of mouths to feed is incompatible with a proper standard of living, is no longer confined to the intellectual classes alone. Even the common man is getting increasingly aware of the fact.

STATISTICAL DATA

As far as could be collected from the statistical data available, it would appear that the world's population is on the increase and dangerously so in Asia, particularly in India and China (Thomson, 1942).



THE GROWTH OF WORLD POPULATION BY CONTINENTS 1750-1950.

Reproduced from "Population Analysis" by T. L. Smith, (Copyright 1948) by courtesy of McGraw-Hill Book Company Inc., New York.

Below is given a table of population growth of the world.

TABLE I—SHOWING POPULATION GROWTH OF THE WORLD BY COUNTRIES FROM 1900 TO 1938*

Figures in thousands

	1938	*1900*	*Increase*
World ..	2,175,604	1,526,923	648,681
Europe ..	540,113	390,179	149,934
United Kingdom ..	50,528	41,471	9,057
France ..	41,980	40,681	1,299
Remainder of Western Europe ..	38,508	28,051	10,457
Germany ..	69,486	50,626	18,860
Remainder of Central and Southern Europe ..	199,598	126,505	73,093
Russia ..	175,982	125,640	50,342
America ..	275,710	150,968	124,742
United States ..	131,669	75,995	55,674
Canada ..	11,420	5,592	5,959
Remainder of North and Central America ..	40,955	28,634	12,321
Argentina ..	13,130	3,955	9,175
Brazil ..	44,116	17,319	26,797
Chile ..	4,684	2,696	1,988
Peru ..	7,200	4,560	2,640
Colombia ..	8,800	4,144	4,656
Remainder of South America ..	13,605	8,073	5,532
Africa ..	155,500	140,700	14,800
Egypt ..	16,380	9,715	6,665
Algeria Tunis ..	10,190	6,543	3,647
Union of South Africa ..	10,070	5,176	4,894
Remainder of Africa ..	118,860	119,266	406
Asia ..	1,193,611	838,852	354,759
Japan ..	72,750	43,847	28,903
Korea & Formosa ..	29,550	13,236	16,314
India‡ ..	405,000	294,361	1,10,639
China ..	450,000	357,250	92,750
Netherland Indies ..	68,400	34,960	33,440
Phillipines ..	16,250	7,635	8,615
Remainder of Asia and Malayasia ..	115,692	64,768	50,924
Oceania ..	10,670	6,224	4,446
Australia ..	6,930	3,774	3,156
New Zealand ..	1,618	773	845
Other Oceania ..	2,122	1,677	445

It is evident that this increase was rather slow in the past, but during recent years, the rate of increase has been very rapid indeed, particularly in Asia. This

* From "Population Problems" By Warren S. Thomson, 3rd. Ed., 5th imp. published by McGraw-Hill Book Co. Inc. 1942.

‡ Preliminary 1941 includes estimates of 16,200,000 for Burma. Data of India alone 388,800,000.

may be attributed to the achievement of science in the partial control of nature or harnessing the forces thereof to work for our needs or to the recent development of preventive medicine and social hygiene by which the so-called Malthusian checks have been counteracted to a great extent specially in Europe and America. The result has been that more people are living for a longer period and helping in the increase of world population.

At the present time India has the second largest population in the world and in proportion to the area available for producing food supplies and industrial raw materials, the density of population per square mile is also amongst the highest in the world, as the Table II† will show.

The rate of decennial increment in our population according to the available census report is about 15 per cent as between 1931 and 1941.

The excess of births over deaths is the only cause of this increase. Table III will show that India seems to have one of the highest birth rates in the world.

TABLE II—SHOWING DENSITY OF POPULATION PER SQUARE MILE

Countries	*Population per square mile*	*Year of census.*
England & Wales ..	.. 685	1931
France ..	.. 197	1936
Germany ..	.. 382	1939
Belgium ..	.. 708	1944
Spain ..	.. 138·3	1945
Denmark ..	.. 224	1940
Italy ..	.. 381	1943
U.S.S.R. ..	.. 20·8	1939
India ..	.. 246	1941
China ..	.. 102	1936
Japan ..	.. 426	1935
South Africa ..	.. 20	1936
Egypt ..	.. 45	1943
Australia ..	.. 2·23	1933
New Zealand ..	.. 15	1936
Argentine ..	.. 13	1945
Brazil ..	.. 12·6	1946
U.S.A. ..	.. 40·8	1940
Canada ..	.. 3	1941
Mexico ..	.. 25	1940

TABLE III—SHOWING BIRTH AND DEATH RATES PER 1,000 INHABITANTS †

Countries	*1911-13*		*1921-25*		*1931-35*		*1941-43*	
	Births	*Deaths*	*Births*	*Deaths*	*Births*	*Deaths*	*Births*	*Deaths*
England and Wales ..	24·1	13·9	19·9	12·2	15·0	12·0	16·3	12·1
France	18·1	19·0	19·3	17·2	16·5	15·7	15·9	16·4
Germany	..	..	22·1	13·3	15·9	11·0	16·2	12·6
Belgium	22·7	15·3	20·4	13·4	16·8	12·9	14·8	13·5
Holland	28·1	13·1	25·7	10·4	21·2	8·9	23·0	10·1
Spain	31·2	22·2	29·8	20·2	27·1	16·4	22·8	13·2
Norway	25·4	13·3	22·2	11·5	15·2	10·4	15·7	..
Sweden	23·6	13·9	19·1	12·1	14·1	11·6	19·3	10·1
Denmark	26·3	13·0	22·3	11·3	17·8	10·9	21·4	9·6
U. S. A.	..	..	24·6	14·2	18·4	12·2	22·6	11·7
Canada	..	..	27·4	11·2	21·4	9·7	24·0	10·0
Japan	34·1	20·2	34·6	21·8	31·6	17·9	..	..
Australia	28·0	10·9	23·9	9·5	16·9	9·0	20·7	10·3
Italy	31·7	19·3	29·8	17·4	23·8	14·1	20·5	14·2
India	38·6	29·9	32·7	26·0	34·4	23·5	32·0	22·0

This excess of births over deaths in overpopulated India has been continuing for decades inspite of famines, pestilence, epidemics and wars and inspite, in addition, of the extreme poverty of the people. Because of chronic malnutrition the people of the country are ill-equipped to withstand the ravages of diseases and the calamities of nature. This is the most patent fact established by each census since 1871.

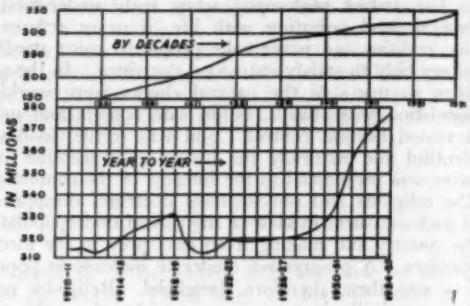
"If we take a generation as a period of 30 years, population in India would increase to 513 million by 1961 if fertility and mortality remain constant".† This would be a staggering figure for Indian administrators and politicians to tackle.

†From Indian National Planning Committee's Report on "Population" published in 1937 (Publishers Messrs Vora & Co. Bombay).

THE POPULATION AND FOOD PROBLEM OF INDIA

The economists of India in their enthusiasm for national upliftment, prosperity and higher standard of living have put forward new solutions of the problem on the apparently sound basis of analogy with the past world history. In India 90 out of every 100 persons live in about 7 lakh villages, 72 of them depending on agriculture alone. Again, about 400 out of every 1,000 persons are landless (Masani, 1944). According to Hindu law the land is fragmented amongst the male children after the father's death, as a result of which the average cultivator has now about 4 acres of land and even that is unevenly distributed here and there. If the present Hindu Code Bill is passed into law the daughters also will share in the division of the land and create further confusion and misery. In other countries *e.g.*, U.S.A. 25 out of every 100 persons live on land and in England only 10 out of 100 do so. The rest have taken to industry to earn their living. In England the average farmer owns 26 acres and in

Canada 140 acres (Masani, 1944). So industrialisation of India may solve her economic problems for the present by increased production of goods and thus providing the surplus labourers an outlet from the field. This will however be solving only half the problem. As a permanent remedy industrialisation by itself is not enough. By this palliative, only the doomsday will be deferred by a short while.



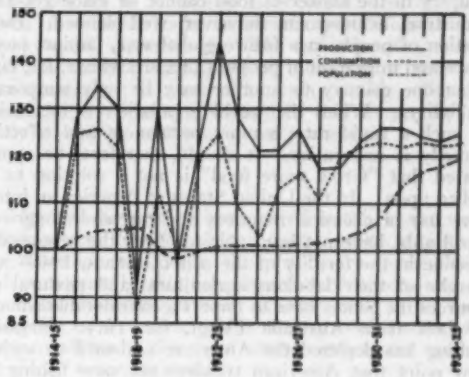
THE GROWTH OF POPULATION IN INDIA

Reproduced from "Food Planning for 400 Millions" by Dr. Radha Kamal Mukherjee (Copyright 1938) by courtesy of Messrs Macmillan & Co., Ltd. Publishers, London.

In "Food Planning for 400 Millions" (Mukherjea, 1938), Dr. Radhakamal Mukherjee, has shown as to how in the past when India was less densely populated, the production of food was always in excess of consumption. But with the rapid increase in population the economy has been reversed.

Apparently the population curve has long ago crossed the production curve. The colossal imports of food grains from abroad can have no other explanation.

According to Dr. Mukherjee, if we accept a figure of 2,800 calories per man per diem (a figure much lower than the average of 3,400 to 3,600 calories for western countries) the total requirement of the Indian population would amount to approximately 292 billion calories. According to the data available for 1931 the aggregate food supply available for consumption in India is 60·1 million tons or 215·4 billion calories. To this may be added 32 billion calories from 1,13,000 million lbs. of milk and 0·7 billion calories from 700,000 tons of fish. So the total available calories including kitchen garden produce, which can never be properly estimated, amounts to 250·1 billion calories at the most. This would have reduced the available calories for individuals in India to 2,337 calories. A more realistic computation considering waste and uneven distribution of food in the various social scales, should make us consider that less than 60 per cent of the total population could have an optimum caloric supply while the rest had to live on 1,000 calories or less. This estimate is on the population figure of 1931. Due to enormous increase of India's population since then, the position has apparently been further complicated. (Chandrasekhar, 1946, and Cork, 1946).



MOVEMENT OF INDEX NUMBERS OF FOOD PRODUCTION, AVAILABLE FOOD SUPPLY AND POPULATION.

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A solution of the problem has been attempted in the "Grow More Food" campaign. Out of about a total area of 447 million acres of land only three-fourths are cultivable; of this again about 100 million acres or one-third is forest area and another one-third or one-fourth is lying fallow (Masani, *loc. cit.*). It is possible no doubt to bring a large portion of the arable land into agricultural use by improved manures and modern machinery. But this will entail two great dangers. By enthusiastic utilisation of all available lands at the cost of the forested areas and pasture lands, the number of cattle will decline sharply and may even run the risk of becoming extinct. The deforestation will adversely affect rainfall and the increased flooding of the rivers will cause soil erosion, lower the water table and bring about an ultimate loss to the fertility of soil inspite of the use of chemical manures.

There is a basic biological equation which states that C=B : E, when C is the carrying capacity (capacity for food, cloth and shelter), B the biotic potential (ability of the soil to produce plants for food, clothing and shelter) and E the environmental resistance (limitations both the environment and those contrived and contemplated by man placed in the biotic potential) (Vogt, 1949). In seeking a solution to our problem, this major factor cannot be neglected. Man does not live in a vacuum independent of his environment. Taking the world as a whole there are about 4,000,000,000 acres of arable land of which 2,600,000,000 acres of land are adaptable to food production. This comes to an average of one acre of land per capita which is absolutely insufficient for an adequate standard of living. It is true that industrialisation may enrich a particular country and by bartering

the produce of industry, the deficit in the amount of food can be imported from outside. But this cannot be true of the world as a whole; for, an overall bankruptcy in the matter of food cannot be made good by industrial achievement however well-planned. Decimation of people in a future global war, famine, pestilence and migration of people (Chandrasekhar, *loc. cit.*) from one country to another may be only temporary palliatives. When the world population is increasing at such a rapid rate, a more permanent and effective remedy is imperative. It should, therefore, be appreciated that "Grow more food" is not a solution to be relied upon. In the United States of America an intensive use of chemical manures and mechanical agricultural aids, have not been able to check the progressive decline in the fertility of the soil (Graham, 1946) and inspite of their fabulous agricultural and pastural resources the States have to import a considerable amount of beef from Australia (Vogt, *loc. cit.*). Intensive fishing has depleted the American seaboard to such a low point that American trawlers are now fishing on the African coast (Vogt, *loc cit.*). These facts should set our enthusiastics of "Grow More Food" to think hard.

Population Problem and Birth Control

In that instructive little book "Our India" Minoo Masani has advanced a number of solutions for some of our pressing problems. All these and other solutions are worth a trial But the hard core of the problem remains unaltered, which is that if we cannot check the progressive increase in population we must have to face a progressive lower standard of living. It has been well pointed out by Cressey (1944) "that no nation has a moral right to allow its population to exceed the production capacity of its own, unless it is willing to accept a lower standard of living". It only remains to be realised that unless the population growth can be stabilised there is very little hope of a higher standard of living for big countries like India and China and incidentally for a permanent world peace.

India should well emulate the progress achieved by the western countries in the matter of voluntary regulation of population through birth control propaganda and widespread contraceptive knowledge. In Russia 1 per cent increase in population is allowed only when there is at least 10 per cent surplus food in hand (Sanger and Stone, 1931). Nevertheless, there every expectant mother is provided state help, hospitalisation and long fully paid holidays, and every child born, legitimate or otherwise, becomes a charge on the state. Yet the very large number of birth control centres run by the state are taken full advantage of (Sanger and Stone, *loc. cit.*). The Russians alone seem to have attained the goal of Margaret Sanger's dictum "Every child born should be a wanted child." It is high time that our economic and administrative experts should cast off their prejudices and take up a scientific attitude for a solution of this burden of overpopulation.

Religion and Contraception

The problem has another aspect which must not be lost sight of. On scientific and economic grounds, control of the overgrowth of population by artificial means will be largely agreed to as a just and necessary measure. It will be a different story with those people who take their stand on religious precepts, sentimental objections and rooted conservative principles. Unfortunately such people constitute a majority in our corporate life. Their opinions and prejudices are based on dogmas rather than a true conception of the philosophy of religion—be it Hindu, Muslim or any other. In fact Indian philosophy when truly understood is dynamic and pulsating with life, it never refuses to face realities and never asks people to court needless misery only to satisfy outmoded doctrines. In the past when so many of the natural checks were working, population was always within safe bounds and never increased beyond control. Soil was fertile, food was plentiful and naturally the use of contraceptive measures was prejudicial to the interest of the community. The religious and philosophical doctrines disapproved of such measures in view of the risk of underpopulating the country and making it an easy prey to the foreign invaders. A progressive moderate increase in population was then, therefore, beneficial. Religious practice, practically in every case, was based on the vital needs of the people of those bygone days. But unrestricted self-indulgence, specially when the result is harmful to the country, has always been frowned upon and abstinence always praised as a virtue. No right-thinking man would agree that an ever-increasing population without proper means of sustenance is a religous necessity or even to be approved on religous grounds. It is only the methods and the risks of abuse that are open to criticism. The remedy lies in practising self control. The energies of conscientious objectors should better be employed in persuading people to practise abstinence until their propaganda bears fruit. A mere negative policy of decrying the available means of attaining the desired end would carry us nowhere and will become positively harmful in controversy. It is interesting to point out that the Roman Catholic religion had to approve certain forms of contraception which do not actually involve the use of contraceptive apparatus.

Contraception and Social Morals

The risk to social morality consequent upon the widespread knowledge and practice of contraceptive methods are no doubt real; nevertheless, they have been vastly exaggerated. If we have faith in the basic goodness of human nature, a faith necessary for any achievement, we must not allow ourselves to be discouraged by fancied apprehensions. It will have to be appreciated no doubt that a small minority will take advantage of the opportunities offered and behave in a manner inimical to social morality. But this is true for all knowledge. The horrors of poison gas warfare have not prevented the teaching of chemistry to all who wish to learn, and bacterial warfare and the atom bomb have not been used as arguments against the widespread knowledge of medicine and physics. The repugnance we feel for venereal diseases has not pre-

vented society from spending untold sums and energy for the treatment and prevention of such ailments. Without condemning those suffering from blindness, leprosy and paralysis, we take all available methods to cure them and teach them how to avoid the cursed maladies. Before we condemn the thousands of unmarried mothers to lives of shame, degradation and the illegitimate children to a life of misery, we should think twice. Moral precepts and social strictures, penal laws and fear of ostracism have been powerless to check them. It is the duty of society to teach them to lead a better life or is it preferable that society should merely punish them even at the cost of blocking all important social measures in fear that a very small minority might take improper advantage of such measures?

The Ways and Means

Scientific birth control aids are now in use all over the world. These may be divided under two heads—permanent and temporary.

Permanent sterilisation generally advocated for persons suffering from leprosy etc. and also schizophrenics to prevent their propagation in the case of both males and females by way of (1) Ligation of tubes and vasectomy. (2) X-Ray sterilisation.

Temporary measures of contraception—(1) For Males by way of caps or condoms. (2) For Females by way of (*a*) Vaginal occlusive pessaries of different sizes, (*b*) Uterine rings, the fitting of which requires the help of a doctor, (*c*) Chemicals, jellies etc. to kill the spermatozoa or to immobilise them, (*d*) Surgical and medical abortion, (*e*) Biological injection of the killed and macerated spermatozoa of the human or of the sheep to produce temporary immunity—but with chances of sensitisation.

Difficulty of such Measures: Permanent sterilisation precludes the possibility of renewal of conception. The use of X-ray in this direction often gives rise to serious symptoms of mental disturbances, specially in the cases of young subjects. Temporary birth control contrivances have also many drawbacks. There are a large percentage of women who do not or cannot follow up the technique, or only use them very irregularly. There are women who become psychoneurotic if they have no method available which makes them independant of a physician. The contrivances are required to be verified by experts as to size etc. and occlusive pessaries must be reinforced by chemical jellies without which failures are sure to occur. The use of the uterine rings is bothersome and requires the help of an expert gynæcologist in the initial stage. Sometimes they give rise to erosion and even malignant growth. From the point of view of pleasure and satisfaction for both male and female, occlusive pessaries like male caps are unsatisfactory. It has been said that exchange of hormones is prevented by their use which sometimes leads to serious psychological and physiological disturbances. The attitude of gynæcologists towards the question of intra-uterine methods of contraception is most often unfavourable. Besides some of the methods advocated in this connection do really constitute methods of early abortion.

It must have to be appreciated in this connection, that in a very large number of cases, inspite of meticulous attention to details, the results are unsuccessful and consequently this consciousness of uncertainty of the technique begets a want of confidence in all contraceptive contrivances. This want of confidence about their reliability is the most serious indictment against the use of contraceptives.

Biological Method: A new and hopeful method is suggested by way of administration of an antigen prepared from macerated spermatozoa. But this could not as yet have been synthetically produced and the small availability of the natural product is in the way of its wide application. The antigen however being a protein may sensitize the subject and its subsequent administration may be difficult and may require desensitisation involving a tedious procedure. Investigations in this direction have also not yet been finalised.

New Method: I have already published a preliminary note on my investigations on the sterility effect of the oil of *Pisum sativum Linn.* Experiments have been carried on upon laboratory animals—white rats—and the results have been very encouraging. One small dose of 0·1 cc. injected intramuscularly into rats will sterilise the animals for 3 to 6 months at a stretch after which they will produce litter at regular intervals. The effect of the injection is not permanent and it may be used on either the male or the female. The important point is that in case it is desired to counteract the effect of the injected oil (sterilisation effect) the injection of vitamin E in good doses will serve the purpose. Its effect can, therefore, be controlled at will. The oil by itself is potent. Its application will not require any special training or intelligence and will, therefore, never be considered cumbersome. One injection of the oil will give protection against conception for one month at least. The oil has been isolated in crystalline form but its chemical structure has not yet been determined which would help in its synthetic production. Even if it cannot be produced synthetically, in the immediate future, it will not matter, for, the seed is an extremely cheap and common cereal and available in unlimited quantity and the extraction of the oil is not difficult.

Trials on human beings have been undertaken and the data collected so far are extremely encouraging.

Conclusions

The qualitative aspect of the population problem should receive the consideration it deserves from all concerned. The Indian National Planning Committee had passed resolutions on this aspect of the problem which run as follows:

"In the interest of social economy, family happiness and national planning, family planning and limitation of children are essential; and the state should adopt a policy to encourage these. It is desirable to lay stress on self control as well as to spread knowledge of cheap and safe methods of birth control. Birth-control clinics should be established and other necessary measures taken in this behalf and to prevent the use or advertisement of harmful methods."

If we are determined not to fall victims to the scourges of nature, we should adopt measures for deliberate restriction of numbers. We must try to influence people through education, teach them to make their sex-life something nobler *i.e.*, which will help the reproduction of desirable progeny for the future nation, for the future of mankind depends on the quality of human life produced. The best thing for us and for the state to do will be, to continue efforts to bring efficient birth control within the reach of the lowest and the least useful classes, for that will solve almost all the problems of overpopulation and incidentally of eugenics.

References

Chandrasekhar, S.—India's Population. John Day Co., New York, 1946.

Cook, R.—Mother India's Starving Children. *J. Heredity*, **8**:37, 1946.

Cressey, G. C.—Asia's Land & People. McGraw-Hill Book Co., 1944.

Graham, Edward, H.—The Economical Approach To Land Use. *Jour. of Soil & Water Conservation.* I. No. 2 1946, p. 59.

Masani, Minoo—Our India. Oxford University Press, 1944.

Mukherjee, R. K.—Food Planning for 400 millions. Macmillan & Co. Ltd., 1938.

Sanger, Margaret and Stone, Hannah, M.—The Practice of Contraception. Balliere Tindall & Cox. London, 1931.

Smith, T. L.—Population Analysis. McGraw-Hill Book Co., Inc., 1948.

Thomson, Warren, S.—Population Problems. 3rd. ed. 5th imp. McGraw-Hill Book Co. inc. 1942.

Vogt, William—Road to Survival. Victor Gollancz Ltd., London, 1949.

PROBLEM OF TUBERCULOSIS IN INDIA WITH SPECIAL REFERENCE TO B. C. G. VACCINATION

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The advantages of B.C.G. vaccination are being, of late, enthusiastically hammered into the ears of the helpless, hardhit and the perplexed sufferers. Notwithstanding its limited advantages and certain obvious drawbacks, it has the official sanction, support and even blessings of the Health Organisation of the U.N.O. It is being continuously placated before the credulous, the innocent and the lay people as an innocuous panacea against all tubercular affections. This has naturally led people to halt and think seriously and with rapt attention. A short survey, therefore, of its blessings and curses may not be considered a panegyric nor its condemnation.

The British view naturally comes first to our mind which is not altogether enthusiastic about the B.C.G. They do not accept it as a sovereign remedy for eradication or suppression of tuberculosis. They do not propose to give it anything beyond a supernumerary trial and that to a selective group of people and not a mass B.C.G. vaccination and that even on purely voluntary basis, where propaganda and persuasion have no place. So declared, Mr. Bevan, the British Health Minister, in the British Parliament.

We cannot always follow the British lead either. The circumstances are widely different from theirs. Our standards of living, environment, climate, nourishment, resources, possibilities, extent of mass education or mass consciousness and our worries are widely different from theirs. We can ill afford to copy them in vital matters. Our needs are to be adjusted according to the local conditions prevailing in a poverty-stricken land. We would naturally jump at anything cheap. A large scale B.C.G. vaccination would certainly be the most appealing to us and naturally be most gratefully embraced, so long it gave, at least, a sense of spectacular security and proved harmless to superficial scrutiny.

We cannot, however, shut our eyes to the fact that notwithstanding all the virtues ascribed to it, it is a live organism and not a dead bacterium. So the risk attending introduction of living organism,—a lethal weapon, persists. On the other hand, its virulence has been attenuated by repeated culture of over 230 times, covering a period of 13 years in the preparation of the original B.C.G. vaccine a quarter of a century ago, of which the present ones are offsprings. Still it lacks standardisation; it has not been made to arrive at a fixed strength which could be measured, named or labelled in exact potency, as in "Virus Fixæ" of attenuated hydrophobia. So it remains an undermined or unmeasured adversary. Notwithstanding high grade attenuation, its potency remains obscure. One is in

absolute darkness on this vital point. If the organism exceeds the optimum strength, it could easily cause harm; if of low virulence or understrength, the immunity imported would naturally be feeble or nil. But its advocates claim it to be above reproach. It is an innocent vaccination endowed with full capacity of protection.

The above digression should not militate against the claim of its efficiency which has been practically admitted on the highest authority and has received equally authoritative acceptance. The minor mistakes, *e.g.*, ulceration, sloughing, necrosis of soft tissues or glands resulting from the escape of injected or abrased material into deeper tissues could easily be ignored, as from faulty technique or accepted as enhanced protection, as these mishaps should import more lasting and stronger immunity, in the bargain. B.C.G. was originally exclusively given to the newborn by oral route in France. Calmette claimed a decrease from 18 per cent to 2·4 per cent in mortality under 4 years where the mother was diseased. Five million up-to-date vaccination, 80 per cent of which by mouth, were uncertain and produced unsatisfactory statistical data. Parenteral introduction would certainly give more reliable figures.

We have still to liquidate another drawback. It is imperative that during the period immediately following the inoculation, the infant should be isolated from all sources of open infection, be they their parents or nearer relatives comprising the family. Even isolation in hospital or in nursing homes is not altogether safe; as during the period of negative phase following inoculation, the infant may be an easy target to prevalent infection existing in those institutions resulting in cross infection. Thus where isolation cannot be carried out, either no B.C.G. should be given or inoculation must be resorted to, sacrificing isolation. One must be prepared to face attendant infection or cross infection. The risk of open infection from the parents cannot be easily avoided. The period of protection imparted may be short-lived. It may require checking every 5th year or earlier and revaccination with B.C.G., if immunity has been in abeyance. This is another point which has to be thrashed or periodically attended.

The magnitude of depredations done, has earned for tuberculosis, the epithet of "captain of the men of death." It has been the major killer of people in the prime of life and has crippled and maimed many promising youths and blasted many happy homes. The incidence of a single case in a family, upsets the economic structure of the entire household. The urgent expenses for other members of the family, not excepting those for children, have to be set aside or substantially curtailed and all the available resources of the family, its fuel and fervour have to be poured zealously to this all consuming furnace. The economic disruption of the family becomes rapid and distressing. Bare necessities have to be curtailed or withdrawn from the more needy members. The repercussion is rapidly evident. They in turn, become suitable soils, from forced chronic privation and neglect, easy preys to the cruel and exacting disease.

The incidence of this vile disease is a correct index to the health and vitality of a nation. Poverty, want, undernourishment, waves of refugees, maladjustment of economics and black marketing easily become contributing causes of any devastating disease, tuberculosis in particular. World shortage of elementary necessities of life, essential cereals in particular, and underproduction are serious problems which have baffled solution. This will continue to remain a nightmare to the food portfolio. A short-sighted policy, a tinkering here and there and the conversion of the country into chronic dumping ground of food grains for exacting exporters, with rapidly depleting sterling balance, should only delay the disaster.

The maldistribution of elementary necessities of life, to take a common example,—the scarcity of milk for those who need it most, the babies, the sick and the invalids when put alongside the comparative abundance of milk products that are being made available or diverted to sweetmeat vendors who make fabulously rich harvest day in and day out, is a glaring example of the grotesque inequity of distribution of this apparently insignificant, yet very precious commodity. To cater for the palate, starving the needy and the sick, sounds cruel and inhuman. Yet it is seen everywhere unmasked, unremorsed without hurting our conscience or consciousness. So long the sugar remained controlled a fair number of our population among the needy remained starved, when decontrolled the entire population might go without milk. The more the sugar was available, the more the milk got diverted to the preparation of sweetmeats.

The powder milk and milk substitutes have made fresh milk almost disappear from the market. Even the milkman and certain dairy farms find it convenient and easy to supply dissolved powder milk, instead of fresh cow's milk. The devaluation of Indian currency has already made the American brand milk substitutes more costly; this along with consequent black marketing has made them rapidly disappear from the market. This may indirectly act as an impetus to cattle breeding and fresh milk production. Dollars will thus not only be saved for more urgent purchases, but give a chance for fresh milk to oust the artificial and not often stale products ignominously and harmfully offered for consumption to our children and the sick.

Mantoux's tuberculin test enables us to ascertain the infection rate of a locality, the percentage of which in respect to Calcutta and its surroundings is very high. The figure obtained as by Mantoux's test, in urban areas is 88 per cent and in rural areas 32 per cent. In infants under 1 year, Mantoux positives were 59 per cent and under 2 years it rose to 68 per cent. The high incidence of the infection in a people, leave very little scope to embark on a mass scale B.C.G. vaccination and that only in a limited scale in the young. As the vaccination is only applicable to Mantoux nega-

tives; a preliminary Mantoux test becomes imperative prior to B.C.G. vaccination as a routine. No measure of protection should be considered adequate, if heavy incidence of the infection was allowed to flourish, in tender years and accepted lyingly with despondency and complacence. A timely and determined action could avert the increase, in the incidence of the infection, in infants.

Over and above these, the mass movements of population following partition of the country, from their erstwhile secure homes, with nothing to fall back upon, except on scanty and inadequate Government doles or uncertain avenues of subsistence, made the refugees, ideal subjects to fall easy preys to this menacing malady. "Tuberculosis is already taking a toll of one life a minute of our population" said Raj Kumari Amrit Kaur, Health Minister, Government of India, at the 11th General Meeting of the Tuberculosis Association of India. Socio-economic conditions and lamentable paucity of hospital beds made it impossible to prevent the rapid spread of the infection.

Of an important measure found fruitful in lowering the casualty rate and spread of infection was the number of beds available for treatment and isolation of open pulmonary tuberculosis cases. No substantial advance in eradicating the disease was possible without providing adequate number of beds for the already existing open cases who disseminate the disease among healthy people. Roughly two beds against each death per year, might be considered adequate protection against such spread, alternatively where vital statistics could not be relied upon, one bed per thousand population could equally answer the purpose. The U.S.A. provide 1 to 3 beds for each recorded annual death, Denmark 2, Great Britain 1, Sweden 1·7. In India, the living condition is much worse compared with these countries. These countries, further make a substantial allotment for prevention and care of the disease. The standard of living and education of their industrial population is admittedly higher. So it is natural that India should score more in morbidity and mortality unless she could increase her available beds correspondingly. This is imperative in view of low standard of living and large-scale under-nourishment and overcrowding everywhere.

In the city of Calcutta with a population of 60 lacs, provision of 1 bed per 1000, would come to 6000 beds but there are scarcely 1000 beds in the whole of two Bengals. Moreover, in Calcutta there is always a huge exodus of floating population. They become easy prey to infection during their short, yet repeated visits, to the metropolis. They thus spread the infection to their distant village homes which so long might have enjoyed the salubrity of freedom from tuberculosis. The total number of beds available for the whole of India is staggeringly inadequate. It is in the neighbourhood of 8000 beds said Dr. Raja, the Director of Health Services of India and our estimated requirements for such isolation were about 2·5 million, thus providing 1 bed for 310-315 patients. Large scale hospital accommodation was essential, but this would take time. Development of treatment at home, was not consistent with safety. This alone, could, under the present circumstances, be persued with vigour as the only alternative. Inadequate measures meet situation equally indifferently. The outlook is gloomy. The inflicted 2·5 million would require Rs. 440 crores in non-recurring and Rs. 100 crores in recurring expenditure per year on clinical and sanatorium treatment. Our national budget is only Rs. 340 crores which cannot allot such a huge amount on tuberculosis alone.

Those who claim their experience with B.C.G. for a period of over a quarter of a century, unequivocally declare it to be harmless and efficacious. The Lübeck tragedy resulted from gross neglect on the part of laboratory workers; here virulent bacilli got inadvertently mixed up with attenuated B.C.G. vaccines. B.C.G. vaccine which is bovine bacillus is harmless and could not produce progressive tubercular disease, provided it was prepared carefully, controlled thoroughly and rightly administered. The World Health Organisation is already solicitious to the Govt. of various countries for the introduction of this prophylaxis. B.C.G. organisms die or become impotent if not cultured afresh every 7-10 days. A great care is expected of them who are entrusted with its preparation. The laboratory workers, responsible for the Lübeck tragedy, were adequately punished and to avoid such mistakes and consequent disasters in future, it is compulsory that B.C.G. should be prepared in a central laboratory where no other cultural works of any description are undertaken. This laboratory could easily supply the needs of various districts of a country and the vaccine could expeditiously be flown to different parts of the land.

B.C.G. has been universally acclaimed and adopted in the Scandinavian countries. It is compulsory in Norway. There has been substantial reduction in the incidence of the disease in these countries as a result of its adoption. When, however the infant cannot be isolated from open cases in the parents, the risk of negative phase following inoculation should be faced to avail of the benefit of B.C.G. Facilities of isolation of infants from their parents are limited in our country. Isolation connotes a strange plight both for the mother and the child. The suggestion of isolation will receive vehement opposition from all concerned and to individuals of average outlook and thinking, it may be found revolting. Moreover, with our limited resources, it is difficult to attain satisfactory or adequate arrangements for care and comfort of the segregated infants. Yet, segregation is better of the two alternatives. When there is no escape from the risk of massive infection, a separation for a period of 8-10 weeks should be made bearable to the mother and her infant, instead of yielding to the counsel of despair or taking up a complacent attitude. Even if it is cruel for both parents and the infant, it must be faced. B.C.G. certainly shortens the period of probable and indefinite separation in later life which may otherwise entail as a result of recrudescence or explosion of the disease any time. In Scandinavia, the

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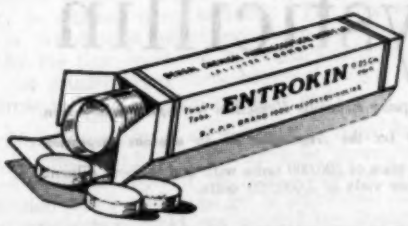

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new born infants receive B.C.G. at birth and are segregated for ten weeks, to allow the development of immunity, whereas with older children, six weeks should ordinarily suffice for protection to develop in them. B.C.G. is claimed to impart protection and prevention. Since its adoption, tubercular meningitis and miliary tuberculosis, the most serious and dreaded types of the affection have practically been eradicated and made scarce in the inoculated children there. On the other hand, the sputum-positive mothers confined under the most favourable conditions and elaborately instructed and scrupulously followed, all ideal preventive measures, failed to reduce the infection below 36 per cent and a mortality of 18 per cent.

There is a large incidence of the disease among contacts, particularly of tender ages. Rapid development of Mantoux's test among contacts in comparison with non-contacts is in full support of this. With the advance of age, infancy, childhood, boyhood, early and late adolescence, the tubercular positive cases show natural increase. Because of slow progress and development in adults and non-incidence of the disease in epidemic form, it is difficult to estimate the implication of the disease with regard to incidence of age. Medlar surveys the incidence of the disease among employees of the Metropolitan Insurance Company. They are employed at 20, x-rayed annually and 90 per cent of them are not contacts. Yet 226 cases among them, between 1935-46, were discovered to have developed tuberculosis, 7 per cent in the first year after employment, 65 per cent within more than 5 years after employment, half of which had more than ten years service; this pointing to late incidence of the disease, makes it problematic, whether prophylactic vaccination in infancy, could have influenced the occurrence of the disease at these late ages.

To introspective and sceptical minds, the record of a single country or Scandinavian countries alone, may not be sufficiently convincing. If B.C.G. which is having a trial now in India, prove successful in bringing down materially, the incidence of the disease, particularly under the present devitalising condition of people, with its trail of misery, privation, indigence, insecurity and want, it could certainly earn the gratefulness of teeming millions and strengthen the claim which Scandinavian workers declare with exaltation and have put forward with iron conviction. There is yet some difference between success achieved there and proposed to be attained here, in India. The success of B.C.G. in Scandinavia might have been materially influenced by the time incidence of primary infection which did not usually occur there before the ages of 18-20, whereas in India the age was very early.

An artificial immunity is all that is vouchsafed by B.C.G. It is difficult to believe that artificial immunity so produced could be superior to that conferred by natural infection which most of us get in childhood. If the natural vaccination could not control the disease how could artificial immunity do it? The prospect of introducing on a large scale in countries where a big section of its population, already get infected at a very early age, cannot possibly strike as a welcome innovation nor sound as a substantial project. Nor could high hopes be entertained about its achievements. It may prove to be a futile waste of energy, misplaced confidence and misdirected adventure which common with similar efforts may end in smoke. Even if we accepted it as a valuable protection blindly, yet the degree of protection and its duration remained uncertian and problematic. In Scandinavia, a small batch of workers succeeded against indifference discouragement and scepticism, by 1939 had established B.C.G. to be a useful protection of undoubted practical value and adopted it for routine use in certain groups of persons. Yet it cannot be denied that the infection was mobile and was not limited to isolated areas or to groups of persons; so restricted protection at most could impart restricted and in this respect it would fall short of its claims. The war conditions and fear of serious increase of tuberculosis speeded up the process of vaccination of Mantoux negatives in Scandinavia. But it was compulsory in certain groups of persons, *e.g.* pupil nurses, medical teachers and attendants there. In the U.S.A. and Canada the interests have not been, till late, sufficiently evoked, though a few series of trials have been reported given and pressure was being exerted to speed up the use of B.C.G. to attain control of tuberculosis. In Great Britain there has been no substantial demand for it, though it is compulsory in Soviet Russia for new-born infants. As mutation or transformation of bovine bacilli of infancy into human type of adolescence is absurd, how bovine bacilli of Scandinavia could offer adequate protection against incidence of human type of the disease in the U.S.A. remains a paradox. B.C.G. has been recommended in Vienna and is used extensively in Switzerland and in the Balkan states and in Poland. In Africa and in China the interest has been active. Wide scale vaccination is in progress in Australia and New Zealand. Scandinavian workers are responsible for creating the widespread interest in it. All credit must go to them.

Honest assertions, unostentatious statements and simple truths of experienced, responsible and reliable workers from far lands, who are actuated by no other motive than humanitarian consideration of lightening the burden and misery of a helpless, perplexed and indigent people, are more welcome and acceptable than the elaborate labyrinth of statistical juggleries which we often come across and fall victims to; the latter obscure our vision and stalemate us by their wily stratagem.

It certainly leaves a big gap unearthed, which may widen the fissure and engulf all the good it might do, likely to have done or presumably will still be doing. If the major assault is not hurled at the source of the disease, the open case is not tackled boldly, vehemently and the principal adversary brought to bay or crushed in its own den, the dissemination of disease progresses unabashed, mercilessly and relentlessly. Without thoroughly overpowering the source of spread, —the existing infections, the vision of vanquishing the major disaster, decimating our population, becomes futile and all big talks about its eradication sound puerile, incoherent and meaningless bluff.

PRACTITIONERS' CORNER

SOME EMERGENCIES IN OTO-RHINO-LARYNGOLOGY AND THEIR TREATMENT

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The features of an emergency disease in oto-rhino-laryngology are:—

1. They are sudden in onset.
2. They cause painful suffering to the patient.
3. They may threaten life of the patient, if not attended to quickly.

Sudden Onset—Almost all the diseases are of sudden onset. An ordinary disease like chronic otorrhea is normally not an emergency, but when there is a sudden onset of intracranial complications with painful suffering and threat of death to the patient, it becomes certainly an emergency case.

There are many diseases of the ear, nose and throat where a surgeon can apprehend or foresee some danger to the life of the patient. Thus a disease which is ordinarily a simple and non-emergent one, in the eyes of a lay man, may be recognised or foreseen as a latent emergency by a surgeon, *e.g.*, a case of chronic otorrhea. A case of chronic otorrhea with a central perforation and unoffensive mucoid discharge of nasopharyngeal origin, is not even a case of latent emergency, not to talk of an acute manifest emergency. But this chronic otorrhea, with an attic perforation and offensive fœtid discharge with or without blood stain, is always a case of emergency in the latent form in the eyes of an E.N.T. surgeon because this is the type of chronic otorrhea which gives rise to intracranial complications and threatens the life of the patient.

It is always to be borne in mind that in an emergency disease something must be done at once either to relieve the acute suffering, or to save the life of a patient.

From the above it will be found that emergency in E.N.T. may be grouped as:—

1. Latent emergency.
2. Manifest emergency, (*a*) cases with acute suffering which if not attended to will not cause death, (*b*) cases which if unattended will cause imminent death of the patient.

Emergency diseases, which if unattended may cause death of the patient will be taken up first.

Emergency Conditions of the Nose

(1) Furuncle of the Vestibule of the Nose: (associated with cellulitis and threatening cavernous sinus thrombosis):

Simple vestibulitis in itself is not dangerous but when from the furuncle acute œdema of the nose, with a tense inflamed angry looking skin surface over the nose extending to the lower eyelid and cheek associated with high fever starts, it must be taken, as a manifest emergency of group 2(b).

Treatment—In previous days anti-strepto serum and free incisions were the only treatment. This resulted in death in almost all the cases. Nowadays the most effective treatment I have learnt from my personal experience and from the experience of many other rhinologists is that,—

(*a*) Knife should be avoided as far as practicable.

(*b*) Penicillin and sulpha group of drugs in proper therapeutic doses should be administered.

(*c*) Locally, (*i*) Unguentum hydrarg nitratis dil (B.P.)—drachm half, olive oil, dram four and liquid paraffin, drachm four to drop into nose 3 or 4 drops, 3 or 4 times daily. (*ii*) Dry heat in the form of a infra-red or short wave diathermy.

With this treatment in the majority of cases the acute inflammation begins to subside within 24 hours and in course of 4 or 5 days the swelling becomes localised and a small abscess forms in the vestibule of the nose, which bursts spontaneously or if there is no abscess formation the whole thing disappears.

(2) Severe Epistaxis: The emergency treatment of severe epistaxis of any origin is one and only one and that is plugging the nose with sterilised gauze. I always advocate that in adults. Before the packing is started morphine ¼ grain and atropine 1/100 grain, should be given and the packing should be done efficiently and thoroughly under proper illumination.

In addition to this, rest in bed and vitamins 'C' and 'K' are given by injection or by mouth, according to the severity of the case; other coagulants may be tried also. If the first plugging fails, I have got very good result by plugging the nose with gel-foam, the other treatments being just the same as mentioned above. The only note of warning is that epistaxis associated with high B.P. should not be attempted to be stopped at once. On the other hand, it is better to watch the case and treat the hypertension. The epistaxis of high blood pressure stops spontaneously with lowering of B.P.

When the epistaxis is associated with fracture of the nose, then first of all morphine and atropine should be given and then under general anæsthesia, the fracture dislocation is to be corrected and nose is to be properly packed with sterilised gauze soaked in vaseline.

When the bleeding is controlled, then proper investigation as to the causation of the epistaxis should be made and treatment done accordingly.

Emergency Conditions of the Oral Cavity and Pharynx

(1) Traumatic Conditions: (*a*) *Acid or alkali burns*—Here the treatment is to clean and wash the mouth, bland applications and gargles with proper non-irritating medicaments. Diet is only milk.

(*b*) *Foreign body trauma*—Perforating injuries of palate by sharp instruments, may occur and the patient

may come with the traumatic implement stuck deep into palate or tongue, or pharyngeal wall. Treatment—If it is a difficult case to tackle, or if the patient is very nervous, it is always better to give general anæsthesia before any attempt is made to remove the material and stitch the bleeding and perforated area.

(*c*) *Secondary haemorrhage* in a case after tonsil operation. Here the real cause is sepsis on a traumatised tonsillar bed. Treatment—(*i*) The injection of morphine and atropine is given first according to age, but it should not be given in children. (*ii*) The blood clot is removed under direct vision; the fossa is cleaned with hydrogen peroxide gargle and mops soaked with H_2O_2. (*iii*) Cold alum gargle is given. This alone usually stops the bleeding. A few pledgets of cotton wool may have to be kept in the fossa for a short time to stop the bleeding completely. (*iv*) If this fails, the latest styptic drugs like gelfoam or oxycel (P.D.) may be tried locally. (*v*) If this fails due to a spurting vessel then the patient should be put under anæsthesia and the artery ligated with deep suture. It should be remembered that it is a difficult job. (*vi*) In some cases nothing short of plugging the fossa with cotton wool soaked with styptics and kept there (*a*) by suturing the anterior and posterior pillars with catgut, or (*b*) by Watson-William's clamp, can stop the bleeding.

When the bleeding has been controlled, then rigorous antiseptic gargles, sprays, lozenges to be given along with the administration of sulpha and penicillin group of drugs according to necessity. The administration of vitamins K or C, coagulants etc. should also be tried, if necessary.

(2) Inflammatory Conditions: (*a*) *Acute faucial and pharyngeal diphtheria* causing dyspnœa and suction of the chest wall and toxæmia. Treatment—Here the first danger is asphyxia and then toxæmia. So tracheotomy is to be done first and then simultaneously with it penicillin and antidiphtheritic serum to be pushed. Steam inhalation sometimes acts very effectively.

(*b*) *Acute quinsy*, very rarely comes under this group. So it is not discussed as it is an emergency under group 2(*a*) of the classification.

(*c*) *Acute retropharyngeal abscess in children*—(*i*) If it is of *peripharyngeal group* then immediate drainage of the abscess should be done without anæsthesia, through the mouth by means of a sinus forceps, under the guide of the surgeon's finger in the mouth. Before operation the child is wrapped in a towel, laid on a table with the head end lowered. As soon as the abscess cavity is punctured and dilated the child is turned on the table, face towards the floor and head hanging over the edge of the table, the mouth being kept open with a mouth gag. In addition to this if suction apparatus is available it is all the better.

The only note of warning is not to perforate the posterior wall of the abscess as then the post-visceral space will be infected leading to mediastinitis.

(*ii*) If it is of *post-visceral* group, then penicillin and sulpha drugs should always be tried before any attempt is made to drain the abscess. If sulpha and penicillin group of drugs do not produce marked improvement then the abscess is to be drained from outside, on the neck, at the anterior margin of sternomastoid muscle. After incision the carotid sheath with structures is retracted laterally and the wall of the postvisceral pouch comes into view.

This type of retropharyngeal abscess may produce death by suffocation and by producing acute mediastinitis.

(*iii*) Retropharyngeal abscess of *prevertebral* group is very rarely an emergency, so it is not discussed here.

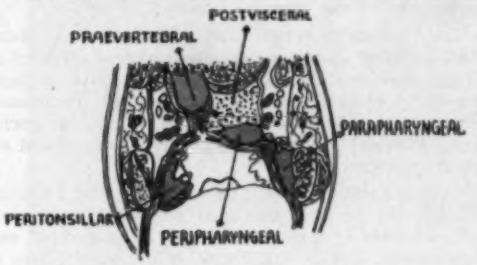

Diagram showing the different sites of retropharyngeal abcess.

(*d*) The last important condition is *foreign body* in hypopharnyx with dyspnœa or asphyxia. Here the foreign body is too big to get into larynx but at the same time sufficiently big enough to produce obstruction to the passage of air entry into larynx and lungs *e.g.*, a big marble or a mango stone. Treatment—Here the child should be held by the legs with the head hanging down. With proper protection of the finger either the surgeon or anybody else pushes his finger into the mouth and dislodges the foreign body. In some cases it may fail and then the only alternative is immediate tracheotomy.

Emergency Condition of the Oesophagus

There is only one condition and that is acute œsophagitis due to corrosive burns with shock. Treatment—The treatment is for shock and the other treatments are just the same as those of corrosive burns of oral cavity and pharynx. The only advice is to start early dilatation of the œsophagus with dilators under direct vision through an œsophagoscope. Of course, there is difference of opinion about this method of treatment. Promising results are often obtained by dilating the œsophagus when the fibrous tissues of the stricture are still tender and soft. There is hardly any danger of perforation of the œsophagus or of the onset of acute œsophagitis or mediastinitis.

Emergency Conditions of the Larynx

These conditions may be grouped as follows:—

(1) Emergencies of Inflammatory Origin:

(*a*) Acute œdema of the larynx—(*i*) infective and (*ii*) non-infective.

(*b*) Acute laryngeal diphtheria.

(*c*) Acute laryngeal obstruction due to secondary perichondritis or abscess formation on the top of any primary affection of larynx like tuberculosis, syphilis etc. Treatment—Here the danger is impending death from suffocation. So the treatment is to make a

passage for the air to enter the trachea and lungs. This can be done in two ways (*a*) by intubation or (*b*) tracheotomy. Intubation is certainly the simplest and easiest method in hospital and it is always the method of choice in non-inflammatory œdema of larynx.

(2) EMERGENCIES OF NEOPLASTIC ORIGIN: Intrinsic growth of larynx either benign or malignant may produce dyspnœa and suffocation, threatening impending death. Treatment—The treatment is early and quick tracheotomy under local anæsthesia and then treatment for the primary cause.

(3) EMERGENCIES OF PARALYTIC ORIGIN: (*a*) Bilateral abductor paralysis of vocal cords of any origin may produce sudden and acute dyspnœa threatening impending death by suffocation. Treatment—Emergency treatment is either intubation or tracheotomy followed by proper treatment for permanent cure of the disease.

(4) EMERGENCIES OF TRAUMATIC ORIGIN: Under this heading the most important ones are:—(*a*) *Trauma of foreign bodies* of the nature of vegetable seeds, fish or fish bones, coins, tooth plates etc. Treatment—Immediate tracheotomy is to be done first and then afterwards the F.B. is to be removed under direct laryngoscopy. Conservative mode of treatment is the removal of F.B. under direct laryngoscopy without primary tracheotomy.

(*b*) *Trauma as a result of instrumentation*—After bronchoscopy or laryngoscopy there may be an onset of acute œdema of the larynx or later-a stenosis of the larynx may develop with dyspnœa. Treatment—Here tracheotomy is to be done, before proper treatment for the laryngeal condition can be undertaken.

EMERGENCY CONDITIONS OF THE TRACHEA

The important condition under this heading is:—

FOREIGN BODY IN TRACHEA: Of all the emergency conditions of the respiratory tract, foreign body in trachea, especially seed or stone of fruits is the most dangerous. Here the victim is usually a child, who is brought to the hospital with a history of having swallowed the foreign body associated with cough followed by acute dyspnœa. 8 cases of this category were seen.

In 7 cases, the bronchoscope was passed through direct laryngoscope and attempt to catch hold of the seed was met with failure followed by death in the majority of cases and by stenosis of larynx in the rest who had to live for years with tracheotomy tube.

The remaining one case was tackled as follows:—

Here, I did not attempt to bring out the F.B. by bronchoscope but took a chance by doing a tracheotomy. After tracheotomy the dyspnœa disappeared. This showed that the F.B. was in the area above tracheotomy tube. Skiagram of chest showed no pulmonary damage in either of the lungs. Under general anæsthesia, the head end of the patient was lowered. I asked my assistant to take out the tracheotomy tube and keep the tracheotomy opening dilated. With long curved artery forceps I explored the upper part of trachea. I felt nothing. Next I passed the laryngoscope and found the F.B. below the vocal cords. I passed a suction metal tube down the glottis through the laryngoscope which was held steady by another assistant. I came back to the tracheal opening which was kept dilated and got ready with a serrated long-beaked curved artery forceps. I then asked my assistant to pass the suction tube downwards into the hypolarynx. This helped the seed (Bakul Bichi) to come down to the tracheal opening and before I could catch it, it was coughed out by the patient. The patient had an uneventful recovery. The tracheotomy wound healed up quickly. This method was successful because the foreign body had not travelled down the trachea.

It appears to me that it is easy to pass a bronchoscope through a tracheotomy opening and any F.B. in trachea can easily be removed. Here the distance up to the F.B., is very short and it is easy to catch hold of the F.B. Some times the F.B. can be removed even without bronchoscopy, by means of a long curved forceps passed through the tracheotomy opening and this is well done on the x-ray table, if the F.B. is metallic.

EMERGENCY CONDITIONS OF THE EAR

(1) ACUTE OTITIS MEDIA IN YOUNG CHILDREN: Where this condition is associated with high fever, convulsions, vomiting, especially if this condition of the ear starts in a child attacked with eruptive fevers, like measles, scarlet fever etc., it should always be taken as an emergency of 2(*b*) group. Here the surgeon is in a dilemma, because he cannot say with confidence that the case is not associated with intracranial complications. Treatment—Myringotomy along with the administration of antibiotics and sulfa drugs. Further operative interference should be judged on the progress and condition of the case.

(2) ANY INTRACRANIAL COMPLICATION OF OTITIS MEDIA: This may be in the form of meningitis, sinus thrombosis, Labyrinthitis (acute purulent type), brain abscess etc. Treatment—The treatment varies with each case.

(*a*) If it is associated with acute middle ear inflammation or acute mastoid abscess then Schwartz's operation is the preliminary part of the treatment and then the seat of disease is to be tackled.

(*b*) If it is associated with chronic middle ear suppuration or with chronic mastoid infection then radical mastoid operation is the preliminary part of the treatment and the intracranial part affected is to be dealt with later.

A case with middle ear disease developing hectic rise of temperature with chill and rigor, which also are the main symptoms of sinus thrombosis, may be mistaken for a case of malaria. Temperature with rigor, in a case of chronic otorrhœa with sudden stoppage of discharge from the ear and associated with pain over the head on the affected side, should always give rise to the suspicion of sinus thrombosis and should be reckoned as an emergency and treated as such.

The rest of the treatment is the use of sulpha drugs, penicillin and streptomycin.

CASE NOTES

A NEW TYPE OF MONSTER

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Mrs. S. B., H. F. 25 years para II gravida III came on 4-6-49 with the complaint of amenorrhœa of 34 weeks' duration and abdominal pain for 2 days. The last two pregnancies and labours were normal and the children are living.

Examination revealed a distended and tense abdomen and fœtal parts were palpated with difficulty. The fœtal heart sounds were audible. The cervix was dilated one finger and the membranes were intact.

A tentative diagnosis of hydramnios was made and a high rupture of membranes was done. The patient was delivered after 6 hours of a live female child, the labour being normal and the recovery of the mother uneventful.

The Baby—No abnormality could be detected till the head of the fœtus was delivered when it was noted that the fœtus had no nose and there was only one eye in the middle of the forehead. The child was alive when born and attempted to breathe through the mouth. The respiratory efforts were of the nature of gasping and continued for about 30 minutes after which the baby died from respiratory failure.

A careful examination of the baby revealed the following features:—

(*i*) The baby was 19″ inches long and 6½ lbs. in weight.

(*ii*) The lower part of the baby from the neck including the chest and limbs were normal.

(*iii*) The head and face of the fœtus were normal except for the following:—

(*a*) The mouth was rather small (Microstoma)—The interior of the mouth was normal but the hard palate was high-arched.

(*b*) The nose was absent. The region where the nose is normally situated was almost flat and there was not even the slightest indication suggestive of its presence in the form of either a dimple or elevation or a depression.

(c) There was only one eye instead of a pair and that also was small and was situated in the middle of the forehead where the eyebrows normally meet. There was only one eyeball instead of two which looked normal without any evidence of fusion. The upper eyelid was normal-looking but the margin of the lower showed a serrated appearance suggestive probably of fusion. The eyebrows were absent.

PHOTOGRAPH OF THE REPORTED CASE.

SUMMARY

(*i*) A report of a new type of monster is presented.
(*ii*) In this case the ante-partum diagnosis was obviously impossible and no abnormality could be detected even when the labour had progressed considerably.

(*iii*) The malformation in this case consists of a centrally placed single eye (uniophthalmos) and a complete absence of the nose. A careful scrutiny of the available literature on the subject did not show any reference to similar developmental malformation.

A CASE OF ABDOMINAL PREGNANCY

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A female, S, aged 30 years, multipara, attended hospital in the early hours of the 4th July, 1950, complaining of antepartum hæmorrhage with pregnancy of 8 months, since 13 hrs. The doctor who attended her in the village 15 miles away had suggested forceps delivery.

Past History—No history of abnormal labour, seven other children were born normal and were

healthy. No history of venereal disease, no history of any accident.

Present History—For the last 13 hrs. the patient had been bleeding per vagina; labour pains started since 20 hrs., but were very feeble; pulse was weak and also imperceptible; respiration shallow and laboured, marked anæmia and abdominal distension.

Examination—Blood was seen oozing out through the vagina, the abdomen showed the appearance of 8 months pregnancy but the presentation of the fœtus was not clearly defined, fœtal heart sounds were present but very feeble. The cervix was dilated two and half fingers but no fœtal parts could be felt, membranes remained unruptured and labour pains practically absent.

The vagina was packed with 10 yds. of 3" sterlized gauge soaked with Dettol lotion. For the general condition 100 c.c. glucose, 5 c.c. redoxon and 2 c.c. coramine were given intravenously and 1 c.c. pituitary extract subcutaneously.

Inspite of this treatment and waiting to see the consequences for nearly 6 hrs. the condition of the patient steadily deteriorated and there was absolutely no improvement. It was then decided to do Cæsarean section under general anæsthesia.

To prepare the case for operation 200 c.c. glucose, 200 c.c. normal saline were given I. V., with injection of 5 c.c. coagulen, 20 c.c. 10% calcium gluconate and morphine and atropine 15 minutes before the operation.

After the abdomen was opened a big cyst like swelling appeared which was later on found to be the bag of waters. It was opened, meconium with liquor amnii drained, and a full term dead fœtus was taken out along with the placenta. All these were lying over the greater omentum and the placenta was attached to the broad ligament of the uterus. The uterus was then examined and was found to be quite healthy of the size of a cocoanut and the Fallopian tubes were absolutely intact and healthy.

The idea of recording this case is that such a case is a rarity. No such case has been seen by the author and his colleagues in the hospital. A point to note was the sympathetic enlargement of the uterus attaining the size of a cocoanut simulating pregnancy of 3-4 months bleeding per vagina which stopped automatically, after the fœtus was removed from the abdominal cavity. This enlargement of the uterus might perhaps be due to another intra-uterine pregnancy but the true state of the uterus was found not to be so on subsequent observations.

The woman is now absolutely healthy, with no discharge. Stitches were removed on the 13th July, 1950.

Acknowledgment—I am thankful to Dr. Salpekar, Civil Surgeon, Rajagarh, who operated on this case in an improvised operation theatre, on an emergency call and gave me permission to publish these notes. I am also indebted to Dr. Miss K. G. Bhagwat of Rajgarh who assisted in the operation and helped me in preparing these notes.

(*Continued from page 232*)

atic drinking," "addictive drinking", and appearance of organic damage or psychic deterioration, has a different significance for prognosis and treatment.

Analysing the extent and nature of the problem from an international point of view, the experts agreed that the level of per capita drinking in a country is no concrete evidence of alcoholism. Similarly there is extreme variation in social drinking customs in different countries and in the types of beverages consumed. In some countries, urban life is associated with a higher rate of alcoholism, while in others the higher rate is to be found in rural communities. High alcoholic consumption may in one place be characteristic of upper-level socio-economic groups, while in another it is at its highest at the lower end of the scale.

In order to define the problem precisely the Committee urged the development of national statistics within every country on the incidence of alcoholism.

The numerical size of the groups affected underlined the need for adequate treatment facilities, according to WHO experts. The Committee felt that all efforts should be made to bring to light early cases of alcoholism where treatment is at its most valuable and successful, and was of the firm opinion that out-patient dispensary services are necessary. Such services can in the early stages of the disorder produce a high protection of successful results, and are best situated in well-equipped general hospitals, at very small cost.

As regards means of treatment, the WHO experts felt that a medical approach devoid of any implications of moral censure, and backed by psychotherapy and social work, would offer the best results.

It was pointed out that no existing drug is a cure for alcoholism. They were rather aids to treatment. Important new drugs such as tetra-ethyl-thiuramdisulphide, when used by qualified physicians are however a valuable aid in well-chosen cases. A strong warning against their use without specialist medical supervision was issued by the WHO experts who pointed to several fatal cases.

The Committee paid tribute to voluntary organisations of the type known in the USA as "Alcoholics Anonymous", an organisation whose membership is composed entirely of alcoholics who have been able to become or are attempting to become abstinent. Experience of this movement is restricted to comparatively few countries outside the USA, but it is considered by many physicians to be the most hopeful social development which has taken place in the handling of alcoholism.

Finally the Committee recommended that WHO should take all steps within its power to stimulate national public health services to take positive action in preventing and treating alcoholism.

JOURNAL OF THE

INDIAN MEDICAL ASSOCIATION

CALCUTTA, MARCH, 1951

SCIENTIFIC MEDICINE

Science is one and universal; it is a common legacy from the past and belongs to the whole of humanity. It is ridiculous to compartmentalize knowledge into Western and Oriental. There is nothing called Asian physics or German chemistry. So also there can be no chimerical classification into this and that medicine, into western gynæcology and indigenous gynæcology. As human knowledge advances, more mysteries of Nature are revealed and the old, fanciful concepts of 'Humours' are replaced by more dependable, though intricate, knowledge of physiology including the nervous system, and so forth.

As Indians, we are proud that even several thousand years ago our ancestors established an elaborate system of medicine known as Ayurveda, but it is nothing but sham glorification of the past to cling to it as a fad and only worship the mummy of the past without enlarging and even revising it with the aid of more recent and verified knowledge. This is sheer idolatry and should be rejected.

Now when our country has shaken off foreign shackles and acquired her long-cherished freedom gaining thereby a new vast horizon that opens up a vista of limitless possibility of progress before us, when the moment has come to revitalize our society with a new cult of scientific attitute, we are alas! dribbling and dribbling, drifting and drifting, groping our way through a dark tunnel of superstitious beliefs and pretentious dogmas. We are certainly not at the end of our long march, but only at a critical cross-road scanning our way to either glory or doom according to our right or wrong choice.

The air is already surcharged with a new atmosphere; inspite of the pundits, science has come to stay as the cornerstone of our future society. To deny it ostrich-fashion burying our nose into the sand of ignorance will be sheer folly. Such an attitude can only put off the emergence of the new for a while but cannot defer it for ever. "Accept science, cultivate scientific attitude towards the universe, verify your beliefs, obey the facts,"—that is the verdict of History. Follow it and prosper, deny it and be doomed. There is no middle course to save our skin. The blindman's buff of the ignorant must end and our blinkering visions must be cured of the spots on the retina. Mere quoting the verses and chapters from the hoary classics, like a demagogue, will not make us better physicians or provide better relief to the suffering humanity. Never.

In his inaugural speech at the last Surgeons' Conference held in New Delhi, our Prime Minister, Sri Nehru, pleaded very assertively for a sane and scientific approach to the problem of medicine, and we hail his speech for its commendable spirit. "To ask people to follow the works of Sushruta and Nagarjuna, the ancient Indian surgeons, and do nothing to develop it", he said, "was nothing but stark lunacy. Approach the Ayurvedic and Unani systems with all friendship and deference, but approach them with all your critical faculties. Do not accept anything simply because Nagarjuna or anybody else had written it but because you understand it and by experiment you find it fit into the scheme of things." The Prime Minister very rightly maintained that to say that Ayurvedic and Unani systems were cheap while the modern system of medicine was expensive was no argument at all. "For, the cheapest thing", he remarked, "is death itself". To walk on foot is certainly cheap, but does that, we ask, justify our doing away with the network of railways? Would it not mean pushing our society back to the primitive days?

It is true that the bitter memory of the days of anti-imperialist struggle makes our people regard everything associated with the British as suspected. Not always without reason, they have a strong bias against whatever had the luck to receive at one time or other the rulers' patronage. Modern medicine, or the western medicine as they call it, being one such thing, they, on the same analogy, want to take revenge on it by starting a campaign, almost a crusade, on behalf of the Ayurvedic and other ancient medicines on the simple, patriotic plea that they are indigenous. But coolly judged, this is not patriotism, only bigotry. Only the insane would suggest that we should abolish

the railways simply because they were founded by the British.

The fact is that the Ayurvedic system, after reaching a certain state of development, became static and dogmatised: it became a dead canon instead of a living applied science; it grew into a rigid code shutting all scopes of further improvement. It might be that the ancient Indian Medicine reached a very high level of perfection but for that to deny the experimental role of science itself in the changed circumstances of the world to-day will be ruinous. Even to-day there is no pause, no rest, no halt for the scientists. Even to-day when man is going to be the master of atomic energy, the query remains, 'After this, what?' Man is still afflicted with diseases; he has still ailments classed under the category 'incurable'; he has still to wage war against the invisible battalions of bacteria.

Even the ancient medicine which laymen in India take pride in, was not an exclusive privilege of ancient India. Most of the ancient peoples had their own crude systems of medicine, as we had ours. And in course of time, most of the countries have discarded their obsolete systems for the modern ones. No system of medical treatment which is static in conception and practice and does not keep pace with the discoveries and researches of workers in the fields of science the world over, can remain a living force now-a-days. No amount of special pleading in the name of patriotism can alter this fact. The indigenous system of medicine as we find it to-day in towns and countrysides has not within its purview the subjects of public health and preventive medicine; moreover, such vital aspects of medicine as obstetrics and gynæcology are not dealt with at all in it.

It is unfortunate that even after full three years of freedom, this vast sub-continent of ours remains abjectly steeped in ignorance, that our countrymen are still an easy prey to the wild rumours and hearsays about faith cures and wonder drugs resulting in the tragedies like Rantalai in Orissa. The policy of passing off the indigenous system of medicine as truly scientific is pernicious and should be discarded forthwith. The time has come when we should, as Sir P. C. Ray used to say, "accept the modern scientific system as the nucleus round which the tested knowledge derived from the indigenous system of medicine may be gathered." All our knowledge should be accumulated on scientific line and any deviation from this basic principle will ultimately spell disaster to the nation. We should never forget that the modern scientific system of medicine did not fall from the sky but is based on all available human knowledge, past and present, indigenous and foreign.

'Freedom' is not a mere political phrase on paper. To be real, it should also connote liberation of society from sorcery and superstition, from medieval ignorance and irrational bigotry. Human civilization, as we find it to-day, has progressed through a long series of trial and error and science has always been the supreme aid and weapon of man in his colossal fight against the hostile phenomena. In fact, the degree of reliance on science is the only yard-stick with which to measure the degree of our civilization. Now that our country is free and floodgates of opportunity are opened before us, let us not waste them away in our purblind and misguided affection for the past.

XVII ANDHRA PROVINCIAL MEDICAL CONFERENCE, RAJAHMUNDRY

The Seventeenth Andhra Provincial Medical Conference will be held at Rajahmundry on 4th and 5th March, 1951, under the persidentship of Dr. G. V. Hanumantha Rao of Guntur.

The Conference will be inaugurated by Dr. T. Lakshminarayana, Director of Public Health, Government of Madras.

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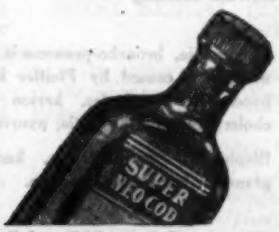

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NOTES AND NEWS

MEDICAL COUNCIL OF INDIA

Dr. C. S. Patel of Bombay was elected president of the Medical Council of India in place of Dr. K. S. Ray, deceased, at a meeting of the Council held in New Delhi in January, 1950. Dr. Raja presided over the meeting.

Dr. S. N. Mathur of Lucknow was elected vice-president in place of Dr. Raja whose term of office expires in February, 1951.

Drs. B. Narayana and K.N. Misra were elected to the Executive Committee from the University constituencies. Drs. B. N. Prasad, B. N. Ghosh and Balbhadra Misra were elected to represent the Council on the Drugs Technical Advisory Board. Dr. C. S. Patel and Colonel A. N. Chopra were appointed as visitors to visit the Orissa Medical College, Cuttack.

The next meeting of the Council will be held on October 20, 1951 at New Delhi.

ASSOCIATION OF PHYSICIANS OF INDIA

The Annual General Meeting and Annual Conference of the Association of Physicians of India will be held in Amritsar on the 2nd, 3rd and 4th March, 1951. There will be a symposium on investigations and treatment of anæmias.

QUARANTINE RESTRICTIONS

Information has been received by the Director-General of Health Services, that the health authorities in Lebanon require from the crew permanently employed on airline from India to Beirut to produce once every two months, an official certificate of bacteriological examination of their stools. Air passengers to that country in addition to being in possession of the usual certificate of inoculation against cholera signed or counter-signed by a doctor in government or municipal employ are to produce a certificate to the effect that the bacteriological examination of their stools effected not more than 24 hours before their embarkation has given a negative result.

Passengers not complying with the above requirements are liable to be quarantined for a period of five days in Beirut for purpose of the examination of their stools or put under surveillance at Beirut or Tripoli and they will have to report daily to the quarantine doctor for five consecutive days.

WOMEN'S WARD IN AMBALA HOSPITAL

Through the efforts of Mrs. Iqbal Nawab Singh, wife of Sardar Nawab Singh, Commissioner, Ambala Division, foundation was laid of a 12-bedded Women's Ward by the Hospital Welfare Section of Ambala which is a part of the Ambala District Red Cross Society. His Excellency Shri Chandulal Trivedi laid the foundation stone of the Ward.

Mrs. Nawab Singh has been able to collect more than Rs. 40,000 the whole of which amount is likely to be required for the construction of this Ward.

PHOTOSTAT SERVICE UNIT AT THE CENTRAL RESEARCH INSTITUTE

The Indian Council of Medical Research have microfilm service units at the Central Research Institute, Kasauli and at the Tata Memorial Hospital, Bombay. The microfilm service has now been augumented by the setting up of a Photostat Service Unit at the Central Research Institute, Kasauli. This Unit can supply photostat copies of articles from medical and scientific publications available at any of the libraries in India. The photostat copies can be read as easily as any printed matter and do not require any special equipment for the purpose. The photostat service is extended to all those who are desirous of availing it.

The rates for this service are:—(1) Up to 11″×6″ Rs. 0-6-0 per page per copy. (2) Up to 17″×11″ Rs. 0-9-0 per page per copy. (3) Up to 23″×17″ Rs. 1-2-0 per page per copy.

Packing and postage charges will be extra. All requests for photo-copying should be addressed to: The Officer-in-Charge, I.C.M.R. Microfilm Service Unit, Central Research Institute, Kasauli.

Requisitions for photostat copies should be marked "PHOTOSTAT SERVICE" in block letters, to avoid any confusion with requests for microfilming work.

WEST BENGAL COUNCIL OF MEDICAL REGISTRATION

The following are excerpts from the proceedings of the meetings of the West Bengal Council of Medical Registration.

MEETING OF 23RD FEBRUARY, 1949—1. The Council decided that L.G.O. (Madras) and D.B. (Manchester U) be recognised for registration as additional qualifications U/Section 21 of the Bengal Medical Act, 1914.

2. The Council recorded the decision of Government re: recognition of the M.B.B.S. (Agra U) as a qualification registrable under section 18 of the Bengal Medical Act, 1914.

3. The Council directed the removal of the name of a practitioner from the Register under section 25(a) of the Bengal Medical Act 1914 for having issued an improper death certificate.

MEETING OF 9TH AUGUST 1949: 1. The Council decided to submit to Government their opinion that the system of Countersignature of Certificates issued by registered medical practitioners by Civil or Presidency Surgeons and Government Medical Officers should be discontinued forthwith by the Government of India.

2. The Council approved the suggestion of the Medical Council of India that there should be a Common design for the seals of all the Provincial Medical Councils; only the name of the Provincial Council should be added to indicate the particular body.

3. The Council directed the removal of the name of a practitioner from the Register under section 25(a) of the Bengal Medical Act, 1914 and to warn another practitioner for having advertised their names and qualifications.

4. The Council suggested an amendment of the Indian Medical Degrees Act to penalise use of unauthorised titles by medical practitioners.

MEETING OF 14TH FEBRUARY, 1950: 1. The Council decided that D.Sc. (Public Health) in Diet and Nutrition be recognised as registrable as an additioner qualification under section 21 of the Bengal Medical Act 1914.

2. The Council considered that it was not necessary that its registration numbers should be distinguished by the addition of any letter to indicate that they are registered with this Council.

INFECTIOUS DISEASES HOSPITAL IN CALCUTTA

Calcutta's hospital for infectious diseases perhaps unique in India, is situated amid semi-rural surroundings off Beliaghata Main Road and consists of four semi-circular structures built entirely of aluminium sheetings on a foot-high, cement-surfaced plinth measuring 100 ft. by 20 ft. With a peak height of some 10 ft. the construction have an ample supply of sliding doors and adjustable windows and can accommodate 50 patients apiece.

The institution, with its limited capacity of 200 beds, functions as an annexe to Sir Nilratan Sircar Hospital (formerly known as the Campbell Hospital), receiving the overflow of infectious diseases patients from the latter. The West Bengal Government, it is understood, plan to build from this nucleus in the course of the next two or three years a much bigger hospital on the same site which will be a self-sufficient unit for the reception and the treatment of all infectious diseases cases in Calcutta.

The structures, for which the fabricators have promised a life of about 25 years, were singularly cheap in construction, costing the State Government only Rs. 5,000 apiece, excluding the cost of the plinth which accounted for some Rs. 3,000. The shining exterior that reflects most of the light falling on it, helps keep the interior cool. It was noticed last summer that the interior temperature was cooler than that in masonry buildings similarly exposed.

GOLDEN JUBILEE CELEBRATION, CALCUTTA MEDICAL CLUB

At a meeting of the Golden Jubilee Celebration Committee of the Calcutta Medical Club Calcutta, the following tentative programme was arranged for the golden jubilee celebrations which will be held in December-January 1951-52.

(*a*) Scientific lectures by eminent medical men—both foreign and Indians.

(*b*) Scientific popular lectures by eminent non-medical men on non-medical but scientific subjects having some relations to medicine, *e.g.*, radio-isotopes, etc.

(*c*) A drive for more funds for—(i) improvement of the club library and (ii) Sir Nilratan Sircar Memorial Oration.

(*d*) Visits to—(i) hospitals and medical institutions, particularly to R. G. Kar Medical College Museum (ii) pharmaceutical and chemical companies and (iii) scientific institutions.

(*e*) Social: Dinner and other parties by (i) individual persons and (ii) commercial firms.

(*f*) Scientific exhibition of medical products.

(*g*) Three prizes of the value of Rs. 250/- each to be awarded to authors of three best articles on purely medical subjects. The authors are free to choose their own subjects. The articles should be submitted before the end of October, 1951.

The Committee will be glad to receive any suggestions regarding the Golden Jubilee Celebrations which should be communicated to Convener, Golden Jubilee Medical Club, 91-B, Chittaranjan Avenue, Calcutta.

MEDICAL AND SCIENTIFIC APPROACH TO ALCOHOLISM

The following is based on information received from WHO Geneva Headquarters:

A pioneer programme for the prevention and treatment of alcoholism on medical and scientific lines was outlined by a Sub-Committee of the WHO Expert Panel on Mental Health meeting in Geneva early in December last. According to this Expert Group, national public health administrations should provide treatment facilities and advisory, educational and other services in this field. It was emphasised that this outlook was quite different from the approach of lay reform groups, and must not be confused with political and social action against alcohol as such.

In an effort to clarify terminology the Committee proposed the following definition of alcoholism: "Any form of drinking which in its extent goes beyond the traditional and customary dietary use, or the ordinary compliance with the social drinking customs of the whole community concerned...." The Committee also agreed on a detailed description of three stages generally observed in clinical studies of the development of alcoholism. Each of these stages of "symptom-

(*Concluded in page 228, column 2*)

REVIEWS

THE ANATOMY OF SEMNOPITHECUS ENTELLUS—A. Ananthanarayana Ayer., pp. 182. Published, 1948, by the Indian Publishing House Ltd., No. 14 Sunkurama Chetty Street, Madras 1.

The book represents a thesis for the M.Sc. degree of the Madras University, 1942. We believe that the excellence of the work might have commended it for any higher degree of any university. We congratulate Prof. Ayer on his bringing before the public this much wanted monograph on the Hanuman monkey of Bengal. Verily he has filled up one of the gaps in our knowledge of the Old-World monkeys. Prof. Osman Hill had, in 1934, presented to the world a remarkable monograph on the Purple-faced Leaf-Monkey. A number of American workers had, in 1933, jointly produced an outstanding work on the 'Anatomy of the Rhesus Monkey'. And now the 'Anatomy of the Semnopithecus' will be hailed as a welcome and authoritative addition to the literature on primates.

Prof. Ayer has treated his subject in an exhaustive and presentable manner. No system or part of the body of the langur has escaped the closeness of his observation. His descriptions and the drawings of what he intends to bring out arrest the interest of the readers and do not tire them out. His style of writing is simple and his accounts reflect his logical thinking. He often compares structures as found in the Semnopithecus with those found in similar situations in other monkeys and thus heightens the effects of his observations.

The printing, diagram and get-up of the book are admirable. The bibliography is reliable and fairly elaborate.

To make it a perfect reference book, we would like to make a few suggestions. The author may include in future editions of his book—(1) A more detailed study of the brain, (2) an account of the embryology, and (3) an account of the appearance and fusion of the epiphyses and the sequence of such fusion at least in the limbs.

Sushil Kumar Basu

TUBERCULOSIS IN THE COMMONWEALTH —1949. Published by National Association for the Prevention of Tuberculosis, London. Pp. 411. Price 15 s. net.

This is a full verbatim account of the 2nd Commonwealth and Empire Health and Tuberculosis Conference held in London from 5th to 8th July 1949. The subjects discussed were: tuberculosis as a world problem; trends in modern methods of treatment including streptomycin; county by county Borough tuberculosis schemes; organisation of comprehensive tuberculosis schemes in British Colonies; problems in the prevention and detection of tuberculosis including the special problems of students and nurses; psychological and social readaptation of chronic diseases in industry and protection from bovine tuberculous infection. Various workers from different parts of the world took part in the discussions and their observations recorded and published in the volume will be of real practical value to those who intend to do special study of the subject of tuberculosis.

HAND BOOK OF MEDICAL MANAGEMENT—M. Chatton, S. Margen and H. O. Brainerd. First Edition 1949. Pp. 476. Published by University Medical Publishers, P.O. Box. 761, Palo Alto, California, Price $3·00.

This is really a very handy book featuring the present day methods of management of cases commonly met with in practice. This is not meant, as the authors describe "to replace the more complete texts and references on clinical therapeutics but rather to provide a readily accessible source of material for every day use." The treatise contains a wealth of information regarding each disease and its management not excluding factors influencing prognosis. The chapter on chemotherapeutic agents dealing with sulphonamides and antibiotics, their uses in various diseases, dosages, methods of administration etc. will be very useful to the reader.

The book, it is proposed, will be revised at regular and frequent intervals to incorporate in it the newer and accepted methods.

The get-up and printing is up to the mark and the authors and the publishers are to be congratulated for bringing out such a useful practical book on medical management.

THE COIMBATORE DISTRICT MEDICAL ASSOCIATION ANNUAL, 1950, Pp. 106, Price Rs. 2.

This annual was published in a grand scale during the Silver Jubilee Celebration of the Coimbatore District Medical Association. In addition to Jubilee Welcome address, Silver Jubilee Address, Annual Report, List of Members and List of Medical Officers, the volume contains nine well-written scientific articles from the members of the Association. We congratulate the publishers.

A HAND BOOK OF AYURVEDIC MATERIA MEDICA WITH PRINCIPLES OF PHARMACOLOGY & THERAPEUTICS, Vol. I—Dr. H. V. Savnur, L.M. & S. Published by Dr. Jathar & Sons, Maruti Street, Belgaum, Pp. 312 plus xviii, Price Rs. 8.

This is a book "fit for the use of students working in the Anglo-Ayurvedic schools and colleges".

The book is divided into two parts, each containing six chapters. The first part discusses the principles of ayurvedic pharmacology, the tri-dhatu theory, rasanna-dhatu and mala-dhatus, the tridoshas, ayur-

vedic pathology and investigation of diseases, ayurvedic pharmacology. In the second part are discussed the pharmacology and administration of drugs, with a note on vitamins. In the appendix, modern knowledge on vitamins is given. An interesting publication.

BASIC SURGERY—Amiya Kumar Sen, M.B. (Cal.), D.P.H. (Lond.), F.R.C.S. (Eng.), First Edition, A. Mukherjee & Co. Ltd., Calcutta, Pp. xiv plus 542, price Rs. 25. *PPPP*

This is a book for medical students admirably written. The subject matter has been made more lucid by numerous pen and ink drawings. This is a book which will be of much use to a candidate for final examination.

A TEXT BOOK OF BACTERIOLOGY—N. G. Pandalai, M.D., D.T.M., F.R.C.S. (Edin), 1948. The Bangalore Printing & Publishing Company Limited, Mysore Road, Bangalore City, Pp. 748, price 18s.

A text book of bacteriology by an Indian author is a welcome publication as we have so far very few worthwhile ones. The subject matter of the book has been presented in a systematic manner and special attention given to applied bacteriology.

We recommend this book heartily to the medical students.

DISORDERS OF SEX AND REPRODUCTION: ETIOLOGY, DIAGNOSIS AND TREATMENT —A. P. Pillay, O.B.E., M.B.B.S., 1948, H. K. Lewis & Co. Ltd., London, Pp. xiv plus 299, price 18s.

This is a very interesting book. Subjects discussed in this book are anatomy and physiology of sex, problem of sex, classification of sex disorders, role of endocrines in sex disorders, hyperæsthetic disorders, anæsthetic disorders, sexual neurasthenia, sterility and artificial insemination.

The author also discusses the sex problems of numerous cases in appropriate chapters which make the book more useful to practising sexologists.

This is a useful contribution to a neglected field of medical study.

MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS—PARTS I and II (written in Bengali)—Dr. Jatindra Nath Ghosal, L.M.S., 1949. Published by M. B. Ghosal, 83, Karbala Tank Lane, Calcutta 6, Pp. 742, price Rs. 12.

This book, written in Bengali, is a useful contribution to Bengali literature. The information contained in the book is accurate.

CORRESPONDENCE

The Editor is not responsible for any views expressed by contributors

HYPERTENSION AND MASSAGE OF SPINAL MUSCLES

Sir,—I have read your interesting editorial on the treatment of hypertension in the July, 1950 issue of the Journal.

In this connection, I beg to draw your attention to the therapeutic effect of massage of the spinal muscles (erector spinæ) with some counterirritant (say mustard oil) in lowering high blood pressure.

I beg to state that I have tried this measure in some of my cases with very good result. I quote from the "Tropical Therapeutics" by Col. R. N. Chopra, pp. 1298:

"Cyriax (1917) reported good result in cases of moderately high blood pressure, obtained by what he described as 'mobilization of the spinal column' by which he meant active and passive movements of the vertebral joints and passive manipulations, vibrations, petrissage of the erector spinæ muscle. He thought congestion of these parts led to irritative states of the erector spinæ setting up a series of sensory stimuli to the posterior spinal nerves which in turn gave rise to a series of pressure effects thus raising the blood pressure. Result of treatment were encouraging. Gunawardene modified this method by substituting electrical stimulation of the skeletal muscles."—I am etc.

9-8-50, Shillong. Arun Kumar Chakravarty, M.B., D.T.M.

EPIDEMIC DROPSY

Sir,—Regarding the inquiry of Dr. A. K. Ghosh of Burdwan about Epidemic Dropsy, I may say without hesitation that largest amount of informations on the subject will be available in Majumdar's Bed-side Medicine, 8th Edition (1949). These include past history, epidemiology, etiology, pathology, complications esp. cardiac, differential diagnosis, prognosis and treatment. These cover from page 966 to page 975 of the book.—I am etc.

6-10-50, Harihar Banerji.
61, Kasba Road,
Ballygunge.

* * * *

Sir,—Ref. Dr. A. K. Ghosh's letter dated 22-6-50, published in the October, 1950, issue of the Journal please refer to my article, Epidemic Dropsy, in Kanpore, (U.P.), published in The Indian Medical Gazette, Vol. LXXII, No. 11, November 1937. The disease is caused by the injurious constituents of the argemone mexicana seeds which are inadvertently mixed with the mustard seeds. There is no specific treatment as far as I know. Cardiac symptoms are predominant in most of the cases, while in others

only œdema of the ankles are seen. In some, both the symptoms are present. In my series of 78 cases, there were no deaths.—I am etc.

28-10-1950, Kanpur

N. D. BANERJI, MAJOR, EX-I.M.S., A.I.R.O., M.B., BS.,
(Member Medical Association, Kanpur Br. of the I.M.A.).

RAUWOLFIA IN HYPERTENSION

Sir,—This is in furtherance to the reply to the letter under the above heading published in Journal of the Indian Medical Association, **20:** 69, 1950. Regarding the pharmacological properties of the alkaloid of Rauwolfia Canescens it may be pointed out that Rauwolscine, the chief alkaloid present in Rauwolfia Canescens has been reported to be depressant of the cardiovascular system in experimental animals. It lowers the blood pressure by depressing the cardiac muscle; in suitable doses it can abolish the pressor effects of adrenaline, *vide* M. D. Chakravarty, Agra Medical College, Science and Culture, March 1942, Vol. 7, No. 9, page 458, (a reference to this has already been made in our paper under discussion). This liquidates his apprehension that Rauwolfia Canescens adulterating Rauwolfia Serpentina would vitiate the results obtained.—I am etc.

9-12-1950. Calcutta.

D. C. MAZUMDAR.

CHLOROMYCETIN IN TYPHOID FEVER

Sir,—We have read with interest the special October issue of your journal. However, we may point out that on page 15 it is stated that Chloromycetin "is a neutral compound containing both iodine and nonionic chlorine".

Chloromycetin does not contain any iodine radical, and the correct structural name is D-(—)-threo-l-p-nitrophenyl-2-di-chloroacetamido-1, 3-propanediol. It is worth mentioning that Chloromycetin is the first compound found in a product of nature to contain a nitro group ($—NO_2$) and dichloracetic acid residue ($-OCCHCl_2$) with non-ionic chlorine.—We are etc.

25-11-1950, Bombay.

PARKE, DAVIS & COMPANY.

* * * *

Sir,—I thank Messrs. P. D. & Co. for pointing out the mistake in the chemical composition, quoted by me in my article. The mistake must have crept in as a typographical error.—I am etc.

16-12-1950, Calcutta.

S. C. CHATTERJEE.

"WONDER CURE" OF SANKOREGHAT

Sir,—I shall be much obliged if you will please publish in the next issue of our Journal how the Suri Branch of Indian Medical Association took a leading part in saving the lives of hundreds of persons from the clutches of impending epidemics at Sankoreghat in the District of Murshidabad.

People suffering from various diseases used to go to this place to partake of a "miracle cure" by bathing at the junction of two rivulets the Brahmani and the Dwarka—every Tuesday; there was a congregation of thousands of persons suffering from leprosy, tuberculosis and other contagious and infectious diseases. The health of the locality and surrounding villages was seriously jeopardised and there was outbreak of cholera and small pox; many persons died of various respiratory diseases due to sudden exposure of chill either on their way home or within a few days after their return.

The members of this branch took a bold front and made an unanimous resolution on 16-12-50 as mentioned below:—

"Resolved that the Suri Branch of Indian Medical Association is of opinion that enormous rush of suffering humanity to Sankoreghat at Murshidabad from different parts of West Bengal and Bihar may cause the spread of leprosy, tuberculosis and pneumonia and epidemics like cholera, small pox, dysentery and influenza. It is further of opinion that the miracle cure is only a myth as confirmed by reports collected from several hundred patients going there. It requests the Premier and provincial public health department to arrange for an early special medical commission to investigate into the true picture of the miracle cure and for publishing special bulletins to the public to this effect".

This resolution was published in various newspapers of the locality and Calcutta between 18th and 20th December 1950; copies were also sent to the Premier, Director of Health Services, Secretary Indian Medical Association (Bengal Provincial branch), District Magistrate and Civil Surgeon, Birbhum. Pursuant to this resolution, Government of West Bengal deputed an Assistant Director of Health Services to visit the area and to submit an immediate report on the situation and published a bulletin on the 25th Dec. 1950, advising the people that the mass congregation might lead to outbreak of epidemics and warned that if pursuasive measures to check the rush failed, the Government would have to issue Sec. 144. West Bengal Government having failed to stop the congregation by pursuasion ultimately had to promulgate Sec. 144 on the 4th January last.

Repetition of Rantalai episode has thus been nipped in the bud. Our branch has expressed its gratitude on the prompt action taken by the Premier and the Health Director, West Bengal and sent a telegram on 26th Dec. last appreciating that its resolution to check this mass hysteria of the miracle cure of Sankoreghat had been immediately attended to.—I am etc.

9-1-51, Suri, Birbhum, West Bengal.

GURU PRASANNA MUKHERJEE, *Secretary*, Indian Medical Association, (Suri Branch).

CURRENT MEDICAL LITERATURE

Painful Shoulder

Harrison (*J. Bone & Joint Surg.*, **31**-B:418, 1949) believes that degenerative processes involving the bone and soft tissues at the attachment of the musculo-tendinous cuff of the shoulder joint are frequent in the middle and later decades of life, and that such degenerative changes can often be shown radiologically before actual rupture of the cuff occurs. Occupational trauma is undoubtedly a causative factor. The roentgenographic appearance is in marked contrast to that of the normal shoulder. The roentgen findings indicative of a degenerative lesion are as follows: (1) irregularity of the cortical bone of the greater tuberosity; (2) loss of the normal outline of the anatomical neck; (3) erosion of bone of the articular surface of the head of the humerus; (4) cystic cavitation; (5) areas of sclerosis.

In a review of patients who had sustained shoulder injuries, it was found that those whose roentgenograms showed degenerative lesions had an average duration of hospital treatment of 49 days, compared to 18 days for those who showed no degenerative changes. Six to twelve months later all whose roentgenograms had shown degenerative changes still had residual disability. In contrast, those cases which had been diagnosed as "simple contusion" showed no serious residual complaints.

Injuries to the shoulder, however, trivial, in patients over middle age, should be studied radiographically.

Radioisotopes

Hunt (*Texas State J. Med.*, **46**:496, 1950) gives in the following the summary of his observation on the role of radioisotopes in blood dyscrasias and neoplastic diseases:

Radioisotopes of phosphorus and iodine offer some promise in the detection, localization, and evaluation of neoplasms.

Radiophosphorus (P^{32}) provides generalized low intensity irradiation, particularly to bone and marrow. It is most advantageous in suppressing polycythemia vera and is a convenient adjunct to roentgen therapy in chronic leukemia through reducing the number of visits of the patient and prolonging remissions.

Radioiodine (I^{131}) is of value in irradiation of the occasional metastatic functioning carcinoma of the thyroid by promoting clinical remission but without fully eradicating the cancer. Other metastatic and all localized cancers of the thyroid are more effectively treated by surgery, roentgen rays, and radium.

Radiostrontium (Sr^{89}, Sr^{90}) provides penetrating beta radiation. Grenz rays promise better control and preservation of underlying tissue with less hazard to the therapist.

Radiosodium (Na^{24}) is less efficient and more hazardous than roentgen rays for general body irradiation.

Radiocobalt (Co^{60}) provides little or no real advantage in intracavitary or interstitial irradiation to those radiologists already equipped with proper radium applicators. Teleradiation by radiocobalt provides such advantages in deep therapy as are inherent in 1,300,000 volt radiation.

Radioisotopes are valuable tools in cancer research.

Endocrine Therapy in Breast Cancer

Paterson (*Practitioner*, **165**:488, 1950) writes that hormones have no value as curative agents in mammary cancer; they may, however, be used with benefit in the advanced case which is otherwise untreatable.

There is no method of predicting which cases will respond to hormones; the evidence is in favour of œstrogens for older patients, and of castration or androgens for pre-menopausal cases. Whichever form of treatment is adopted, it is reasonable to persist for about three months before regarding the case as unresponsive. Thereafter recourse can be made to the opposite hormone, although the chances of a response are slim. If the patient responds, the duration of treatment depends upon her tolerance of the hormone.

After eventual failure of growth restraint in a case successfully treated by œstrogens, further benefit may be obtained by androgens, and *vice versa*.

Androgen has been given as testosterone propionate in oil, intramuscularly generally in doses of 300 mgm. at weekly intervals and patients have also taken in addition 20 mgm. of methyl testosterone daily as sublingual tablets. There are some side-effects of androgens which include deepening of the voice, development of acne and of a facial hair, cessation of menses in premenopause cases and in certain cases hypercalcaemia specially in patients with metastatic bone lesions treated with larger doses and in cases where there is some impairment of kidney function.

Stilboestrol is probably the œstrogen of choice. The following doses are approximately equivalent against breast cancer when given as daily doses over periods of months: Triphenylchloroethylene—3 gm.; M—2613—600 mgm. and stilboestrol—20 mgm.

Streptomycin in Urinary Tuberculosis

Jacobs and Borthwick (*Brit. J. Urol.*, **12**:238, 1950) from an analysis of the results obtained in a controlled trial of streptomycin therapy for tuberculous disease of the urinary tract observe:

The treatment has no effect on an established caseocavernous renal lesion. This is not surprising, for in spite of the high elimination of streptomycin by the kidney a blood-borne therapeutic agent must for the most part be excluded from such an avascular focus. By encouraging fibrosis and consequent constriction there is a possibility that the focus, though itself remaining active, may become shut off. A regression of the constriction, however, can occur. Streptomycin therapy cannot, therefore, be recommended to supplant surgery, and in clinical unilateral renal tuberculosis the diseased kidney should be removed.

The authors do not advise its automatic employment in all cases unsuitable for surgery. Thus when there is an advanced bilateral renal lesion or an advanced lesion in a solitary kidney no improvement in the kidney lesion can be anticipated and vesical contracture may be accelerated.

From the experience with Group 2 cases (unilateral renal tuberculosis—major lesion necessitating nephrectomy, cystitis) the authors consider that streptomycin may prove beneficial as an additional therapeutic measure possibly before as well as after surgery. Accepting Medlar's claim that in renal tuberculosis both kidneys at the outset are involved by minimal lesions, then, after nephrectomy for a unilateral clinical lesion, streptomycin should diminish the risk of activation and development of the disease in the apparently healthy kidney. This

statement is given with reservation, however, for in Group 1 cases (unilateral renal tuberculosis—minor lesion without cystitis) the contralateral kidney became tubercle-positive in three out of seven treated cases, whilst this occurred in only two out of the eight controls.

Streptomycin does have a definite beneficial effect on secondary tuberculous cystitis, but this would appear to be relative to the presence and degree of disease in the upper tract. Thus in the Group 2 cases, that is, those with a unilateral renal lesion who have been nephrectomised cystitis has cleared and the urine has become tubercle-negative in an appreciably larger number of streptomycin treated cases than has occurred with the controls. With Group 5 cases (major bilateral tuberculous lesions and minor bilateral lesions), however, consisting chiefly of patients with well-established bilateral disease, no beneficial effect on the bladder resulted. In the few cases of Group 5 in whom the bilateral lesions were minimal, the effect of streptomycin on the bladder has been good.

It will be evident from the results the authors have so far obtained in this controlled trial that the administration of streptomycin to those suffering from urinary tuberculosis is not an alternative to prolonged sanatorium care or to nephrectomy when the renal lesion is a unilateral one. Employed as an additional therapeutic measure, however, streptomycin may enhance a patient's chances of recovery.

Malaria Simulating Acute Appendicitis

Morales *et al* (*J. Philipine M. A.*, **25**:135, 1949, Ref. *Trop. Dis. Bull.*, **46**:1108, 1949) write: After removing normal appendices from two patients with symptoms of acute appendicitis who later responded to antimalarial therapy, they adopted a more critical attitude towards patients with a diagnosis of appendicitis in malarious countries. They report six cases in which a diagnosis of acute appendicitis was either considered or made but in which further investigation revealed a malaria infection as the cause of the symptoms.

In all six patients, the localizing symptoms, pain and tenderness in the right iliac region, occurred after several days of malaise, fever and sometimes vomiting. This fact and the finding of normal or low leucocytic count led the authors to suspect malaria which was confirmed by the finding of malaria parasites in the peripheral blood in each case. The infecting parasite was *Plasmodium falciparum* in five cases and *P. vivax* in one.

The authors consider that the cause of the symptoms is the blocking of the capillaries of the mucosa and villi, and they discuss the course of the nerve impulses set up locally in the appendix and cæcum by this protozoal infection.

Treatment of Hyperthyroidism

Ravdin and Johnston (*Am. J. M. Sc.*, **220**:213, 1950) give in the following lines the summary of their observation:

The current literature on the treatment of hyperthyroidism has been reviewed in an effort to assess the value of newer methods of therapy particularly propylthiouracil and radioactive iodine. The following conclusions are based partly on this review and partly on the personal experience of the authors.

Subtotal thyroidectomy remains the treatment of choice for patients suffering from hyperthyroidism.

Mild cases may be prepared satisfactorily with iodine for 10 days to 2 weeks preceding operation.

Severely toxic patients and those with complications should be treated with propylthiouracil long enough to eliminate toxicity or to permit satisfactory control of complications. Iodine then may be given for 3 weeks and operation performed with no greater risk than in the initially mild cases.

Non-operative treatment of hyperthyroidism is still undergoing evaluation.

(*a*) Prolonged treatment with antithyroid drugs is rarely justifiable. The mildly toxic patient with a small diffusely enlarged thyroid may be treated in this way but the chance of permanent cure is small.

(*b*) Radioactive iodine offers great promise in the treatment of hyperthyroidism, but until the dosage can be estimated more accurately, and until the problem of late deleterious effects has been resolved, this method of treatment should be limited to patients of advanced age or others in whom surgery is contraindicated.

These concepts are in accord with those of Ravdin, Rose and Maxwell who have had an extensive personal experience in dealing with hyperthyroid patients.

Finally, it must be emphasized that there is no truly physiological treatment for hyperthyroidism available to-day. However, the search for such a rational form of therapy must continue and the newer methods of study of thyroid function and disease make probable its eventual discovery.

Tuberculosis and Pregnancy

Stallworthy (*Lancet*, **2**:221, 1950) at the meeting of the section of Obstetrics & Gynæcology of the B.M.A. emphasised the importance of unsuspected endometrial tuberculosis, which was found, he said, in 2-5 per cent of curettings. The classical symptom of amenorrhœa was uncommon in these cases, and more than half of them had some increase of menstruation. Both bacteriological and histological tests were necessary for diagnosis and for proof of cure, and he referred to the work of a committee now investigating the effect of streptomycin treatment, which held that three negative tests at monthly intervals were essential before cure could be presumed. Infection might spread in a symptomless case, and the only death in 48 patients who had been seen at Oxford occurred in one such patient who refused treatment. Sanatorium treatment was unsatisfactory, and hitherto the only cures had resulted from radical surgery, but the use of streptomycin combined with p-aminosalicylate had produced apparent cure in 5 cases out of 6, and this treatment could be carried out at home. If, however, it did not bring improvement, radical surgery should be resorted to.

In the discussion several cases were quoted in which apparent cure or improvement followed the use of streptomycin, and two speakers referred to the exacerbation sometimes seen in pelvic tuberculosis after diathermy.

Dr. R. C. Cohen, in a paper on Phthisis and Pregnancy, said that there was no evidence that pregnancy had any harmful effect on tuberculosis if good treatment was given. Of 335 active cases in pregnancy which had been admitted, only 35 had retrogressed, and this was little more than the expected rate. He felt it difficult to justify the use of therapeutic abortion, but admitted that social factors also had to be considered here. Radiography should be carried out as a routine in pregnancy. In the treatment of active disease in the pregnant woman, attention to secondary anæmia and to the mental condition was important. Inhalation anæsthetics, including gas-and-air, could be given, a long second stage should be avoided, and caesarean section should be resorted to for disproportion to a greater extent than otherwise and in cases of tuberculous laryngitis. The use of artificial pneumoperitoneum after delivery had no physiological justification, but the use of an œstrogen was important. Streptomycin could be given without any increased risk of reactions or harmful effect on the baby.

In the discussion Miss Phillis Dingle referred to the rapid deterioration that sometimes followed delivery and said she was convinced of the value of an artificial pneumoperitoneum. It was essential to use a large volume—as much as 3000 c.cm. —of a mixture of oxygen and air. Other speakers laid stress on the favoured conditions under which Dr. Cohen's patients were treated, on the importance of social circumstances, and on the difficulty of getting patients into a sanatorium.

Cervical Erosion

Ross (*Brit. M. J.*, **2**:647, 1950) writes that cervical erosion is a common and incapacitating lesion, and its clinical manifestations are not sufficiently recognized. This lack of appreciation of the symptoms of cervical erosion leads to the failure to look for, find, and treat the cause of many gynæcological complaints, thus in many instances condemning the patients to chronic ill-health as a result of such symptoms as leucorrhœa, backache, abdominal pain, and dysuria.

Menorrhagia, pruritus vulvæ, dysmenorrhœa, dyspareunia, cervical hæmorrhage, sterility and a sense of pelvic weakness are some of the less common symptoms caused by cervical erosion which must be properly assessed.

Worse still is the case of the patient who is subjected to some unnecessary operation on a mistaken diagnosis, when abdominal pain is the presenting symptom and the presence of a cervical erosion is overlooked.

The teaching so commonly heard that pain felt in the lower abdomen in one or other iliac fossa is ovarian in origin is, in the author's submission, unsound. Much more often such pain is due to cervical erosion, and the cervix should be inspected in such cases. Indeed, it should be inspected in all cases presenting the symptoms which have been discussed.

The treatment of cervical erosion by cauterization of the cervix with electric thermocautery in the out-patient department, without anæsthesia and without preliminary dilatation of the cervix was in most cases found to be very satisfactory. Of 128 cases treated by cauterization, 99·2 per cent were cured, with a recurrence rate of only 4·7 per cent. Cauterization was not carried out during pregnancy and six weeks were allowed to elapse after delivery before an erosion was cauterised.

Serious complications after this treatment were few, and occurred in only 0·7 per cent of a series of 870 cases. Although mild secondary hæmorrhage from the cauterized area was relatively common, it was exceptional for the bleeding to be severe enough to necessitate the admission of the patient to hospital. Hæmatometrium and pelvic cellulitis may occasionally occur. The author opines that if the cervix is cauterized in the presence of chronic pelvic infection, such as a chronic salpingitis, there is a very considerable risk of a severe acute exacerbation.

Treatment of Habitual Abortion

Bowes (*Practitioner*, **165**:553, 1950) in an answer to a query writes that the agreed treatment is bed rest at the time of the suppressed periods up to the eighth month. Sexual intercourse should be avoided. A small continuous dose of thyroid is probably worthy of trial. The question of the value of other endocrine treatment must then be raised, and here division of opinion is sharp as to whether it is effective and which endocrine to give. Bishop's recent findings suggest that progesterone is of some use, and he advocates pellet implantation early in the pregnancy. The alternative view is that of the Smiths, who maintain that œstrogen treatment is better, starting with 5 mgm. stilboestrol orally each day at the sixth to seventh week of pregnancy, and increasing this dose by 5 mgm. at fortnightly intervals to the fifteenth week, and then by 5 mgm. each week until the end of the thirty-fourth week of pregnancy, when it is discontinued. The basis of this treatment is the supposition that œstrogens reduce the complications of premature deficiency of the placental steroids. Oestrogens may also act on the uterus itself, and there is a further supposition that abortion of the later type (five months onwards) may be caused by vascular change in the uterine wall taking place when the uterine shape alters from a sphere to that of a cylinder.

Prostigmin in the Heartburn of Pregnancy

Sullivan (*Am. J. Obstet. & Gynec.*, **60**:205, 1950) on the basis of his findings in 151 cases writes that all these were women 'who complained of daily recurrent episodes of heartburn and who failed to obtain relief from a medical regime consisting of increased protein and fat intake; a decreased carbohydrate intake; omission of fatty and fried foods and chocolate from the diet, the elimination of smoking, and the use of aluminium hydroxide in liquid and tablet form'. One millilitre of a 1:2000 solution (0·5 mgm.) of prostigmin methylsulphate was injected into the gluteal muscles. Of the 136 women treated in this way, 124 experienced rleief lasting for at least three days, and generally for seven to ten days. Forty-eight of these cases required at least one subsequent injection because of recurrence of heartburn. Fifteen of the women who gained relief from prostigmin were given a second injection consisting of distilled water, and of these only two reported improvement. The remaining thirteen women who obtained no relief from distilled water responded to a subsequent injection of prostigmin. As a further control, 15 women who had not been given prostigmin were given an injection of distilled water, and again only two reported improvement. No instance of vaginal bleeding, uterine contractions, induction of labour or fall in blood pressure was noted in any of the women who received prostigmin.

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Pruritus Vulvae

Peterkin (*Practitioner*, **164**:559, 1950) mentions the following as potential causes of pruritus vulvæ:

Systemic conditions—Focal sepsis; diabetes mellitus; hepatitis; and blood diseases such as leukæmia. *Venereal diseases*—Primary sore; moist papules; condylomata lata; ulceronodular syphilides; gonorrhœa; and chancroid. Although most syphilitic eruptions do not produce itching, those located in the vulvar region often do so. *Gynæcological causes*—Trichomonas vaginitis; cervicitis; urethritis; prolapse; monilial vulvo-vaginitis; kraurosis; and leukoplakia. *Dermatological conditions*—Contact dermatitis; flexural infective eczema (including seborrhœic dermatitis and intertrigo); flexural psoriasis; tinea; monilial vulvitis; circumscribed neurodermatitis; Besnier prurigo (asthma-eczema or atropic dermatitis); lichen planus; lichen sclerosus et atrophicus; and fixed drug eruption.

Treatment:—*Routine measures*—Although scrupulous cleanliness should be insisted on, overwashing with soap and water often inflames an already tender skin. Gentle cleansing with olive oil and cotton-wool is usually harmless and soothing, and can be followed by the application of a thick paste such as Lassar's, which also protects the area from exteral irritations. Ointments containing local anæsthetics should only be used to tide a patient over an emergency and never as a routine, owing to the risk of sensitization.

Treatment of an itching crisis—Relief can be obtained by the frequent application of starch poultices, or either hot or cold compresses. A sitz-bath containing potassium permanganate is often helpful, as are infra-red rays and heat from an ordinary electric bulb. A useful and usually harmless prescription is: Phenol—60 minims, prepared calamine—180 minims, zinc oxide—120 grains, glycerin—120 minims, milk of magnesia—to 6 ounces.

To be dabbed on with cotton-wool as required.

Sedatives are indicated; for some, of a hysterical temperament, elixir bromovalerian (Gabail) is ideal; others tolerate phenobarbitone or a more potent barbiturate; a few are helped by the antihistamines in high dosage, although generally their effect is disappointing.

Treatment of individual cases—Once the possibility of venereal disease has been eliminated, and focal sepsis excluded by every possible means, the local cause must be discovered and treated.

Fungicides—Probably the best is a preparation of undecylenic acid which is best prescribed as "fungicidal ointment—Boots" (or "decilderm ointment—Duncan Flockhart"), 1 ounce (31 g.); K. Y. jelly to 2 ounces (62 g.). Mycil ointment and pessaries are effective but more liable to produce contact dermatitis. Castellani's paint is a most useful antipruritic fungicide, can be diluted with water if too potent, but has the great disadvantage of staining clothing.

Crude tar, either as a paint or as a paste, is extremely useful but must be applied with caution and only when the skin is dry and scaly. It is indicated chiefly in circumscribed neurodermatitis, asthma-eczema, and in the healing stages of fungus infections, psoriasis and flexural infective eczema.

Antihistamine creams, such as anthisan and benadryl, are effective only in asthma-eczema and neurodermatitis, and may produce severe reactions if used on the simple bland applications such as calamine lotion, zinc ointment, or even white petroleum jelly.

Radiotherapy is an extremely potent weapon, but a dangerous one. It should be used carefully in conjunction with other treatment and only because of definite indications, *e.g.*, neurodermatitis; the best results are obtained from fractional doses.

Subcutaneous injection of anæsthetics, such as proctocaine, is extremely efficacious in selected cases, and should be done by a gynæcologist in an operating theatre.

Hormonal therapy, once so widely acclaimed as a wonderful treatment for pruritus, especially in menopausal women, has little value in the average case, either by mouth, injection, or local application. It is useful, however, in ointment form in some cases of kraurosis and lichen sclerosus et atrophicus.

Hydrochloric acid, supplemented by large dosage of vitamins, especially vitamin A.

Psychotherapy has occasionally to be invoked in severe and persistent cases, but generally is not required.

Mumps in Pregnancy

Schwartz (*Am. J. Obstet. & Gynec.*, **60**:875, 1950) reports of eight patients who definitely had mumps during pregnancy and two who probably did, none had defective offspring. An eleventh patient aborted during her convalescence from mumps. This is in contrast to several cases reported in the literature, in which abnormal infants followed maternal mumps acquired early in pregnancy. In one of the author's patients, maternal mumps was followed later by an abruptio placentæ.

Genital Tuberculosis

Vieira (*Bol. Soc. chilena de obst. y ginec.*, **14**:130, 1949, Ref. *Am. J. Obstet. & Gynec.*, **60**:700, 1950) writes that during 1947 and 1948, there were 1,710 gynecologic patients admitted to the author's service, 225 of whom presented adnexal or peritoneal lesions. A definitive diagnosis of genital tuberculosis was made in 33 of these patients, representing 1·9 per cent of all admissions and 14·7 per cent of patients with pelvic inflammatory disease. Forty-nine per cent of the patients were in the third decade of life, but only one patient was older than 40 years. The most prominent presenting menstrual complaint was dysmenorrhœa, recorded in 21 per cent; 18 per cent of the women had amenorrhœa; 49 per cent had no menstrual abnormality. One-half the patients gave a previous history of tuberculosis, but only 6 per cent had active tuberculosis on admission. Sixty per cent of the patients were in excellent general physical condition. Eighty per cent gave a history of sterility. The commonest presenting symptom was pelvic pain, present in 88 per cent of the patients; 24 per cent had febrile manifestations. The diagnosis was established by endometrial biopsy in 86 per cent of the cases, the remaining diagnoses being postoperative pathologic findings.

The author believes that the advent of streptomycin therapy will greatly modify the hitherto largely surgical approach to the problem of genital tuberculosis.

A Principle for Determining Prognosis of Pregnancy in Rheumatic Heart Disease

Bunim and Appel (*J.A.M.A.*, **142**:90, 1950) write that from 1939 to 1948, 205 women with rheumatic heart disease were observed during pregnancy and the puerperium at Bellevue Hospital. In this period, pregnancy was interrupted in 11 other women with rheumatic heart disease, because the prognosis was considered unfavourable. There were 299 babies delivered, including 6 pairs of twins; 2 women died undelivered. In 122 cases delivery was spontaneous, in 68 by forceps, in 9, breech deliveries; cesarean section was done in 6 cases, but only on definite obstetric indications. There were 3 deaths in the entire series, but no deaths from congestive heart failure in women who were under the authors' care throughout pregnancy and the puerperium. Congestive cardiac failure developed during pregnancy in 36 of the 205 women or 17·6 per cent; failure occurred most frequently in the second half of pregnancy. In those cases in which the duration of rheumatic disease could be determined (interval of time from the onset of the first rheumatic manifestation), it was found that only 4 per cent of those who had rheumatic disease for less than ten years developed cardiac failure, while 37 per cent of those with a duration of the disease over twenty years became decompensated during pregnancy. The average age of the group in whom cardiac failure developed was greater than in the group without failure. Another important factor was the cardiac reserve before pregnancy. Thus of 118 patients in Classes 1 and 2 (New York Heart Association classification) only 4 developed cardiac failure during pregnancy, while failure occurred in 32 of 87 patients in Classes 3 and 4. A history of previous cardiac failure was also of importance. Pregnancy as such was not found to alter the course of rheumatic heart disease. The indication for interruption of pregnancy in the 11 cases in which this was done (per vaginum) were based on the study of the factors which affect the prognosis or rheumatic heart disease *per se* especially the functional capacity and history of previous failure.

(*Continued from column 2*)

There are many forms of treatment. X-rays to the scalp short of producing an erythema are said to be effective; these should be given by an expert, of course, because of the hazard of producing a permanent alopecia due to overdosage. Filtered therapy is one of the most effective methods; it should be used in graduated doses, and some attempt should be made at using stimulating quantities. Recommended agents for local application to the scalp are both numerous and varied, but in general they have irritant properties. One is liquefied phenol, which is quickly neutralized by alcohol as soon as the treated area develops a parboiled appearance. Another popular agent is Cutler's fluid, which consists of equal parts of tincture of iodine, phenol and chloral hydrate. This is applied to all the parts and repeated on the average of once a week, or as soon as the irritation subsides. It is probable that this disease tends to run a course which in most cases is self limited. In the malignant variety the hair continues to fall until a total alopecia results, and this is permanent. In total alopecia the loss of hair may not be total, although some alopecia remains permanently.

YOUR QUESTIONS

Correspondents should give their names and addresses (not necessarily for publication) and include all relevant details in the questions which should be typed. Questions of medical interest only will be acceptable for this section. They should be sent in a separate envelop marked "Your Questions". Questions of general interest will be published in preference. Lack of space precludes answering all the questions received.

Q. *In one of my patients with lichen planus an attack of gout causes the skin condition to disappear. Whether it is the gout that is responsible for this or the colchicine he is taking has something to do with the disappearance would be interesting to know.*

Ans. No relationship has been established between lichen planus and gout as yet, if one is to depend on the medical literature, nor has any case in which the two conditions were coincidentally associated been reported. It is not definitely known whether colchicine has got any effect on the course of lichen planus. It will be interesting to know whether any practitioner has tried this medicine in a case of lichen planus.

Q. *A patient has found it necessary to take more than one series of prophylactic treatment for rabies in the last few years. He has developed muscular weakness of both lower extremities, hyperæsthesia to a level corresponding to the twelfth dorsal vertebra and retention of urine following the last series. I would like to know if there is any safe prophylactic to be recommended.*

Ans. No other specific preventive for rabies has been discovered except rabies vaccine. It is obvious that the patient should not take any more vaccine treatments but must avoid rabies infection. Such infection in all probability takes place only through bites by rabid animals, but the possibility of contamination by infective material of a wound or break in the skin or oral mucous membrane is possible. Undoubtedly the repeated series of preventive treatments taken have left behind some degree of specific resistance.

Q. *What are the prognosis and effective therapy, if any, for alopecia of the head, eyebrows and eyelashes which has gradually become complete during the past year in a normal 27 year old man. He has normal distribution of the axillary and pubic hair.*

Ans. This is undoubtedly a case of alopecia areata, which from the description may go on to that known as alopecia totalis. The prognosis depends chiefly on the amount of hair loss and the age. If the alopecia is partial, the prognosis is, of course, much better and roughly parallels the amount. The youth of the patient tends to make the prognosis more favourable. As far as is known, the distribution of hair dependent on sex has nothing to do with alopecia areata.

(*Concluded at foot of column 1*)

SUPPLEMENT

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XIII U. P. PROVINCIAL MEDICAL CONFERENCE

The following is the Presidential address delivered by Dr. M. Atal, at the 13th U.P. Medical Conference held at Kanpur on 29th August, 1948.

The amazing progress of science during the last 150 years owing to the liberation of human mind from doctrine, dogma and creed brought about by the epoch-making French Revolution has shed a considerable light on the important and vital phenomena of life. This newly acquired knowledge has enabled us not only to better the lot of of the ailing humanity by alleviating pain and suffering, restoring the sick to health, enabling the blind to see, the deaf to hear, and the maimed to walk; but has also made it possible for us to increase the strength and beauty of the human body, and add a few millimeters to the stature of the short. Not only all this, but over and above it, it has put means in our hands to eradicate certain fell diseases and dire epidemics which plague our society today.

These are the achievements of which humanity may well be proud of. This does not mean that we have solved all the problems of health, and can now gleefully afford to rest on our oars. The domain of the unknown yet remains vast, indeed, the discovered when placed side by side of the undiscovered looks small.

The important things here to note is that our positive achievements in the realm of medical science show that we are on the right path, our approach is correct, and have got hold of a key that will in course of time open one by one all the doors of the mysteries of life for us.

The medical science as we see it today is no wonder plant that has come into existence out of a void by waving the enchanted wand of a magician, nor has the merciful Providence out of pity for the afflicted humanity revealed it to us. It is a plant of great antiquity having its roots in the dim distant past of which history does not furnish us any story.

The contribution of our forefathers towards the cultivation and the growth of this plant has been remarkable. Let us study it.

Ayur Veda which deals with the science of medicine is an "Upa Veda" or supplemental Veda, and is based on Rig Veda and Atharva Veda. The medical part of the Ayur Veda comes from the Rig Veda and the surgical from the Atharva.

The ancients all the world over believed that Medicine was handed down to them by the gods. Our progenitors were no exception to the rule. They believed that Brahma taught Ayur Veda (the science of life) to Dakshprajapate, and he in his turn to Ashvini Kumars. These two brothers were very keen students of the science of life.

Having come to know that sage Dadhyanchi has been taught Brahma-Vidya by Indra, they betook themselves to this sage to learn it. When with him they came to know that Indra imparted Brahma-Vidya to Dadhyanchi on the explicit understanding that the sage should not teach it to any one else. This, however, did not deter the two brothers from pursuing the object on which they had set their heart, their resourceful brain suggested a strategem which solved their difficulties.

Ashvini Kumars were great in the art of healing. It is said that they cured people of consumption, and gave (false) teeth to the toothless, and furnished (artificial) eyes to the blind. There is nothing unbelieveable in this, as there are verses in Rig Veda where it is mentioned that the surgeons fitted "iron-legs" on to those that had lost their legs and put in artificial eyes in those whose eyes had been gouged out in warfare. The wonderful Ashvini Kumars acquired so great a proficiency in Ayur Veda that even Indra went to learn it from these two geniuses.

The next famous man in the art of healing is Atreya who was Indra's pupil. Atreya is one of the oldest authorities on Indian Medical Science. He imparted this learning to others. Some of his pupils as for instance Agnivesha and Harita became famous physicians afterwards.

This is one version of the genesis of the Ayur Vedic medicines. Another version of its origin is given by Charaka.

According to him once upon a time there was a meeting of the Aryan sages on the Himalayan mountains. During their learned disputations they complained that their studies and researches were often interrupted by ill-health, disease, and disorders of the body, and somehow a release from them should be found. The assembly thereupon requetsed the sage Bharadvaja to go to Indra and learn from him the science of Ayur Veda. He did so, and as a result of it they lived healthfully thereafter.

The two most revered that have come down to us from the past are considered by the Vaidyas to be the highest authorities in Medicine, they are Charaka and Sushruta. Charaka's "Charaka Samhita" and Sushruta's "Sushruta" are held in great esteem even today.

After Charaka and Sushruta, comes Vagbhata in the 2nd century before Christ. In his standard works, "Ashtanya Sangraha" he elucidates certain passages in the works of the previous writers which by then had become ambiguous.

After a lapse of considerable time we come to Madhava, a versatile genius, who not only wrote several works on various learned subjects, but in the fullness of time became the Prime Minister to a Raja of Vijayanagar in the 12th century A.D. He composed a work in medicine called "Madhava Nidana" in which he deals chiefly with diagnosis. He is considered by the Vaidyas even today unsurpassed in diagnosis.

In 1550 A.D. lived the famous physician Bhava Mishra in the North Western part of India (Madra Desha). Some of the Europeans who came to India about this time were found to be suffering from syphilis. They went to the celebrated Bhava Mishra for treatment. He prescribed for them a concoction of mercury, catechu and honey. As most of the European patients who went to him came from Portugal he gave the disease the name of "Firanga Roga", *i.e.*, Portuguese disease, there being no Sanskrit name for the disease. It may be also of interest to note that Bhava Mishra divided the disease into three stages. (*a*) Bhya (external), (*b*) Abhayntara (internal) and (*c*) Bahirantara (external internal).

Bhava Mishra also enriched Indian Pharmacopœia by introducing foreign drugs such as "Badakshani", "Naspase" and "Khorasani Vacha".

The books continued to be composed by learned Vaidyas on Indian medicine from time to time up to 1670 A.D. After this period which corresponds to the reign of Aurangzeb the decadence of Indian medicine set in.

Now let us briefly mention the theoretical basis of Ayur. Vedic medicine as expounded in the works of these great Indian writers.

They believed that there were three principle "humors" in the body called "Doshas", namely "Vata", "Pitta" and "Kafa". I may remark in passing that their location in the body and their functions and properties are fully discussed by them.

I think a great injury has been done to the proper understanding of Ayur Vedic medicine by equating 'Vata' with wind, 'Pitta' with bile, and 'Kafa' with phlegm. It is impossible to convey any notion of the concept which lies behind these words by translating them by any single word in any foreign language.

The 'Doshas' are divided into seven "Dhatus" whose location, properties, and function are also mentioned.

It is interesting to note that Rakta (blood) which is one of the Dhatus is mentioned circulating in the blood vessels, thus anticipating to a certain extent the famous discovery of the great Harvey in the year 1616.

The anatomical knowledge of the ancients though considerable is defective and unreliable, and their pathology based on humoral theory raw and primitive. As to their etiology of diseases, it is fanciful in the extreme. Diseases are said to be caused by (*a*) superhuman agencies, (*b*) by Karma, (*c*) and by disorders of humors, as for example corrupt Shukra (semen) or ovum is held responsible for leprosy.

According to Harita, the murderer of a Brahmin will suffer from anæmia, a cow-killer from leprosy, a regecide from consumption, and a murderer in general from diarrhœa, and one committing adultery with his master's wife from gonorrhœa. (What a commentary on the morals of the women of the better classes of the time!!). Though etiology and pathology of the Ayur Vaidyas were capricious yet the methods of Vaidyas of treating diseases were on the whole efficacious. They diagnosed diseases by symptoms and physical signs and employed inspection, palpation, percussion and auscultation for examining their patients.

The examination of pulse was considered the most important of all. The Vaidya is instructed to note its compressibility, frequency, regularity, size and the different impressions it produces on the fingers. Here again one cannot help observing that startling conclusions are drawn from the observations of the pulse.

It is when we come to the treatment of the diseases that a vast store of knowledge is opened up for us to survey. We find that a large number of both vegetable and mineral drugs were beneficially employed by Vaidyas in the treatment of their patients. Some of these drugs have withstood the test of time. They also employed such curative means as massage, thermal baths, etc. There is no doubt that the glory of the Ayur Vedic system of medicine is its Materia Medica and Therapeutics. Here it may be noted that as an adjunct to treatment the Vaidya was recommended to carefully watch the omens before going to attend a patient, and in case of unfavourable omen was enjoined to postpone his visit for some more auspicious occasion.

The demonical diseases were quite logically treated by charms, incantations, and amulets.

Prognosis was a matter of omens, dreams and astrology along with the interpretation of signs and symptoms of the disease.

So far as I know the principles of public health are not enunciated in Ayur Veda, though some wise instructions as regards personal hygiene are mentioned. Here again one has to note that fancy was given full play, as for instance we are told that the use of Arka twig tooth brush will bring strength, of mango health, and those of Pippala and Jajube wealth and good dinner respectively to their users.

The story of the divine origin of Ayur Vedic medicine is quite on a par with the story of the creation of man mentioned in Genesis. Both of them spring from the fertile imagination of the inventors of these lovely anecdotes.

The source of Ayur Vedic medicine lies somewhere else. The excavations at Mohenjo-daro and Harappa leave little room for doubt that pre-Vedic people of India were highly cultured and civilized. One has only to think of their religion, of their art, and to look at the Hall, the Great Bath, and the Drains at the excavations at Mahenjo-daro to be convinced of it. There is enough evidence to show that the Hindus of the Vedic period borrowed the worship of animals,

trees, stones, and the faith in charms and amulets from them. Not only this but they also imported some of their deities, as Sakti and Shiva, into their pantheon. For be it noted that the Rudra of the Rig-Veda is no other Shiva Pasupati of these people.

Mohenjo-daro and Harappa people were also conversant with the yogic practices as is shown by the portrayal on a seal of an image of trimukha Shiva sitting in yogic postures on a throne, and by the stone statue of a yogi with his almond eyes fixed upon the tip of his nose in contemplative fashion. The four armed gods of the Hindus like Brahma and Vishnu have also been anticipated by the standing four-armed figures occurring among the Signs of the Indus-Script. Even our world-famous Nataraja has been forestalled by a statuette of a male dancer standing on his right leg, with his left leg raised high found at Harappa.

I have said enough to show the high cultural state of the people of the pre-vedic period of India and have shown how profoundly they affected the practice and thought of the Hindus in religion and art. Now it will be naive in us to suppose that the people so civilized, and of such cultural attainments did not possess medical science of their own in keeping with their attainments in other branches of learning. For be it remembered that the man in a much earlier age had discovered medical and surgical means to deal with diseases. The archeological excavations and the explorations of the caves in Europe and elsewhere have revealed to us that man very soon after his appearance employed charms and drugs to get rid of disease. As soon as he learnt to grind he began to make bone surgical instruments, whose utility has been tested in modern times. There can be no doubt that the Vedic Hindus who learnt so much from pre-Vedic people also learnt medicine from them. Only the pedant and the doctrinaire will deny it.

In view of the fact that concerted efforts are being made at present by influential groups of people to oust the modern scientific system of medicine by what they are pleased to call the indigenous systems of medicine, I thought that it will not be out of place if I put before you a bird's eye view of the Ayur Vedic medicine so that you may know what it is which is proposed to be introduced into the country. For when we talk of the indigenous medicine we have Ayur Vedic system in mind.

As regards Hikmat it cannot be claimed that it is an indigenous system, as it has its roots in the antiquated and discarded theories of the ancient Greek medicine. The followers of the Unani system of medicine have made no original contributions to the theory of medicine; though they produced such eminent and famous physicians as Rhazes (Al Rasi), Serapion (Ibn Serobi) and Avicenna. They were all men of deep and vast learning. It is interesting to note that they critically studied the works of the ancient Indian Vaidyas, and approvingly quoted from the works of Charaka and Vagabhata. It seems that Unani physicians concerned themselves mainly with therapeutics, without bothering much about the principles underlying their science. It seems they acted on Charaka's saying "that is true medicine, and that the true physician, that cure and eradicate disease."

The replacement of the modern system of medicine by the indigenous will be a catastrophe of the first magnitude. If such a misfortune were to befall us the society will be doomed to suffer from the fell epidemics; and the horrible diseases of the Dark Ages will reappear and be rampant in the land.

What else do you think will be the consequence if you replace the growing medical science of today broad based upon such sciences as zoology, anatomy, physiology, bacteriology, immunology etc. by one which possesses no exact knowledge of anatomy, has fanciful knowledge of physiology and pathology, and has not even heard of bacteriology or immunology, and knows nothing of the modern methods of the investigation of disease.

It is curious to note that the modern medical science though it has through its wonderful performances captured the imagination of the people of Europe, America, Australia, and New Zealand, yet has failed to impress us with its grandeur and majesty. It is, I think due to the fact that our people have not seen the advantages which accrue to the community when the health services are run on proper scientific lines. The hospitals they see are so ill-equipped and badly managed, even in our important towns and cities, that the managing board of a parochial dispensary in any civilized country will be ashamed of it.

As to the public health service, we have one, but in name only. The authorities in the past thought, and even now seem to think that they have done their duty by the community if they have appointed a Public Health Officer at each district of the province. Now to dot the country over with badly run and poorly equipped hospitals, and appoint Public Health Officers without supplying them with the sinews of war to carry on their work properly and efficiently, is to bring the hospitals and the public health services to disgrace. People who have to pay heavy rates and taxes to support these institutions on not receiving the value of their money naturally become dissatisfied and grumble. I ask you, under prevailing conditions who in our country will be impressed with the achievements of the modern science of medicine?

This being the situation it behoves us medical men to think of the ways and means to improve the medical services of the country.

I put before you, and through you before the country certain suggestions which I consider to be *sine qua non* for improving the health of the community.

In order that the health of the community be properly looked after, it is obvious that we should have a requisite number of efficient and well trained medical men. This raises the important question of medical education. Owing to great political and social changes that are taking place in our country today, it is obvious that medical education in our country will have to change considerably to keep pace with the changed conditions of life. The time and space do not permit me to discuss, this all important question here, beyond observing that the physician of tomorrow will be quite unlike the physician of yesterday, and that our Universities will have to change in order to produce him. There is one very important point in this connection to which I will, in passing, draw your attention. It is that the task of the teachers in the medical faculty of the University is not to transmit a second-hand knowledge of medical facts imported from abroad, useful though it is to a certain extent. Our Universities should do much more than that. They should be centres of research, and no one should be allowed to teach who is not a research worker himself. Exceptions will have to be made in the case of exceptionally skilful surgeons and accoucheurs during the transitory period.

This brings us to the question of remuneration of the medical men engaged in doing the research, as also teaching and professional work at the Universities and Hospitals. I think they should be well paid to free them from the financial worries, and enough respect and social considerations should be shown to them. They should be *persona grata* with the society in proportion to the value of their work. We should also provide them with all the amenities of civilized life, so that they can carry on their research work in comfort and peace of mind.

I am strongly of the opinion that they should not be put financially in such a position as to feel the want of supplementing their income by private practice. If our physicians and surgeons in charge of hospitals engage themselves in private practice, apart from the fact that it opens the door to corruption and dishonesty for the weak, and of unbecoming subterfuges for the strong, it will do grievous harm to the research work by taking away so much of their precious time and attention from their proper activities. This sort of thing should never be allowed to happen.

Before I leave this subject I would like to say that we shall have to modify considerably our ideas about hospitals. Hospitals should not be looked upon as charitable institutions provided for the poor and the indigent by the benevolent or the state. They should be looked upon as institutions where the sick and infirm humanity, whether rich or poor, goes to seek relief from suffering. Furthermore, anyone who goes there has a right to expect that he will be skilfully treated according to the up-to-date methods of the medical science, and that humane and considerate treatment will be meted out to him. Our hospitals will have to undergo both organisational and architectural changes before they can meet the new demands created by the changed orientation.

We have now to turn our attention to the Public Health of the community. This opens up a vast subject. I shall content myself by drawing the attention of the Government to those things only which can be accomplished without much difficulty.

In the interest of the health of the community the Government should immediately take steps to prevent the sale of food and food material injurious to the health of the people. I know paper legislation exists on this point, and conscientious public officers are doing something about it; but what is being done is nothing as compared to what should be done. Government should compel the local authorities on pain of condign punishment to keep roads, lanes, by-lanes and open spaces in their charge clean, and under proper repairs, and the drains under their care in proper working order. The authorities should also provide expert treatment for people suffering from Venereal Disease, and make the communication of it an offence. It should open hospitals for the incurables, homes for the infirm and the impecunious, and prevent lepers from frequenting places where men congregate. Every school child should be examined occasionally by a competent medical man, special attention being paid to the examination of eyes, ears, nose and throat. Every necessitous school child should be properly fed and clothed.

The Government should also pass laws prohibiting the sale of spurious medicines and drugs, and injections. No medical preparation which does not come upto the required standard should be allowed to be sold in the country. And Government should come down with a heavy hand on the proprietors and advertisers of quack remedies, and mercilessly mulct people who put in indecent and immoral advertisements in our papers, and disfigure our hoardings with them. And in order to prevent the exploitation of the ignorant, the silly and simple the affixing of word "doctor" as a title just before his name by an unauthorised person should be made a criminal offence, and orders should be issued forthwith to all the departments and institutions under Government not to employ the appellation "doctor" as a designation for person not entitled to it.

Government should carry on vigorous propaganda by press and platform to popularize the use of nutritious food and to create health sense in the community. Because if cooperation of the people with the public health authorities is not forthcoming, not much can be done to improve the health of the community.

The nations that have succeeded in introducing the public health measures are fully reaping the benefits. They have banished epidemics like cholera and plague from their countries and have reduced the incidence of infective fevers like typhus, typhoid, scarlet fever, diphtheria etc. to a vanishing point. They have also been successful in reducing their death rate, infant mortality, and the mortality of women at child

birth. They have brought about the prolongation of the duration of life, and have increased the sum total of health and happiness in the country.

I have no doubt that some of you will have read "Report of the Health Survey and Development Committee". This *opus magnum* contains a great deal of salutary recommendation which should be accepted and acted upon. But unfortunately both our central and provincial Governments have acquired a habit of appointing commissions and spending lavishly the tax payer's money on them, and then pigeonholing their reports. Believe me a problem is not solved by merely appointing a commission and afterwards studying, discussing and debating its reports, but by acting on its recommendation. It is true that the adoption of the Health Survey and Development Committee Report will cost a tremendous amount of money which is by no means available at present.

No one has ever suggested that the report be acted upon in toto immediately.

What is surprising is to see that the Government is making no serious efforts to adopt means to procure money for implementing its recommendations. I suggest that the state should monopolise the manufacture and sale of drugs and also of other medical appliances. It will I am sure, in due course of time, bring in as much money as is needed and more.

One thing more, my colleagues of the medical profession, before I close, I would like each of you to take a keen interest in politics as the time is fast approaching when the state will touch every aspect of our professional activities. I assure you the niggardly treatment meted out to our Association by the Government and other local bodies will disappear if they know that politically we are not a negligible factor.

Professional brethren, I am fully conscious of the honour you have done me by electing me your President and I sincerely thank you for it.

* * * *

Resolutions Passed at the XIII U.P. Provincial Medical Conference

1. *Condolence.*—This Conference mourns the unesteemable and irreparable loss suffered by the death of Mahatma Gandhi—the friend, Philosopher and Father of the Nation—under whose guidance our Nation has attained its freedom.

It cannot find words strong enough to condemn the foul act, which has brought this calamity and untold suffering by extinguishing the light that was guiding the country.

The members of this Conference pledge themselves to uphold the causes near and dear to the great departed soul, and solemnly promise to stand by the nation at this crucial juncture in its history. His teaching will always serve as the loadstar by the light of which we shall course our future.

2. *Condolence.*—This Conference places on record its deep sense of sorrow at the sad demise of the following members of the profession, and conveys its heartfelt sympathy to the members of the families of the deceased:—Dr. P. Dutt, Allahabad; Dr. B. N. Vyas, Lucknow; Dr. K. K. Sinha, Banaras; Dr. B. N. Mukerjee, Allahabad; Dr. M. A. Hadi, Meerut; Dr. Jai Lal, Meerut; Dr. R. K. Kacker, Getia—Nainital; Dr. R. S. Srivastava, Dehra Dun; Dr. K. N. Segal, Lucknow; Dr. S. N. Mazumdar, Banaras; Dr. K. D. Chakravartty, Lucknow; Dr. J. S. Tiwari, Unao.; Dr. Bala Prasad; Banaras.

3. *Medical Reorganisation.*—This Conference regrets to find that none of the main recommendations of the Bhore Committee have so far been implemented. It is strongly of opinion that those parts of its report which have been recommended by the U. P. Reorganisation Committee for acceptance should be given effect to at an early date.

4. *Quackery.*—This Conference notes with regret the tendency on the part of men unqualified in the modern scientific system of medicine to set up practice in that system. The Government should take early steps to stop this practice.

5. *Nutrition.*—This Conference notes with alarm the continued deterioration in the health of the people of this Province, particularly women and children due to poverty of the masses, increased cost of living, and scarcity of the essential and protective articles of diet, such as milk, eggs, fish, ghee, meat, cereals, fruits and even fresh vegetables, and recommends to the Government that suitable steps should be taken at a very early date to remedy this state of affairs.

6. *Representation of the Indian Medical Association.*—This Conference recommends to the Government that the U. P. Provincial Branch of the Indian Medical Association or its local Branches should be represented on the following bodies as the case may be:—(*a*) Boards of Management or other Committees of all Medical College Hospitals, District and other Hospitals in the Province including Female Hospitals. (*b*) Provincial and District Development Boards. (*c*) Railway Advisory Committees. (*d*) Red Cross Society and St. John's Ambulance Association. (*e*) Sanatorium Committees. (*f*) U. P. Tuberculosis Association and Anti-Tuberculosis Leagues. (*g*) Board of Public Health, U. P. (*h*) Intermediate and High School Examination Board. (*i*) Universities with Medical Faculties. (*j*) All Municipal and District Boards and Notified Areas, Kanpur Development Board and other Town Improvement Trusts. (*k*) Planning or other Committees dealing with Medical and Public Health Departments. (*l*). Council of Physical Culture, U. P. (*m*) Provincial Epidemic Board and other bodies to be created in future where questions affecting the health of the public are likely to be discussed. (*n*) Provincial Advisory Excise Board.

7. *Appointment of Staff in Medical College.*—This Conference recommends to the Government that the appointments of fully paid teaching staff of the Medical Colleges in U. P. be made through an Independent Selection Committee of five persons, in which at least one person should be independent and senior medical man from outside the Province and one representative suggested by the U. P. Provincial Branch of the Indian Medical Association, and this principle be enforced forthwith.

8. *Sales Tax.*—This Conference requests the U. P. Government that the members of the Medical Profession holding registrable qualifications be exempted from the operation of the Sales Tax, where the Doctor dispenses medicine to his own patients only and does not act as a general chemist or druggist, as has been done in Madras, Bombay, East Punjab, and C. P.

9. *Industrial Medicine.*—As the problem of production is the most important need of the present day, and as this depends on the conservation of men power, which can only be attained successfully by maintaining Industrial Workers in optimum health, this Conference recommends that an Institute of Industrial Medicine be started in U. P. as early as possible, and that such an institute should carry out both teaching and field work.

10. *College of Pharmacy.*—This Conference recommends to the Government that if the Drugs Act 1940 is to be properly implemented, classes in Pharmacy should be started as soon as possible in the various Medical Colleges or by separately establishing a College of Pharmacy.

11. *Post Mortems.*—This Conference resolves that all bodies not claimed by relations within the prescribed time, should be made available for Post-mortem examination for purposes of teaching and Scientific Research or sent to Anatomy Department for dissection and that no organisations or societies should be permitted to claim these bodies.

12. *Increased Training of Nurses.*—This Conference deplores the lack of Nurses in various Medical Institutions and Hospitals of the Province. The Conference draws the attention of the U. P. Government in this connection to the recommendations of the Bhore Committee and the U. P. Reorganisation Committee and requests that these be implemented as early as possible.

13. *Compulsory Military Training.*—This Conference welcomes the decision of the Government in introducing Compulsory Military Training, and requests that it should be extended as early possible to all men and women between the ages of 18 and 20. The Conference further requests that adequate provision be made for proper nutrition of trainees so as to enable them to take maximum advantage of such training.

14. *Home for Incurables.*—This Conference recommends that Hospitals for incurables be established at suitable Centres for accommodating them.

This Conference further recommends that the Government should take steps to establish suitable Homes for people suffering from highly infectious and unsightly diseases and seen walking about the streets, frequenting and begging in public places.

15. *Compulsory School Lunch.*—This Conference is of opinion that in the interest of the future health of the Nation, it is necessary that urgent steps should be taken to organise proper nutrition of children of school-going age and, that a scheme of compulsory school lunch based on modern scientific knowledge be enforced as early as possible.

16. *Licentiates.* This Conference requests the Army Headquarters and other employers that they should so frame their Medical Policy that the legitimate interests of Licenciates are fully safeguarded.

17. *Fee for Licentiates.*—Owing to the rise in the cost of living and the fall in the value of money, the present scheduled rate of fee for all Licentiates in Railway Medical Services and in other Civil Departments be raised from the present scale—which is low and inadequate—to Rs. 4 per visit for visiting patients at home.

18. *Promotion of Licentiates.*—This Conference requests the Provincial Government that in view of the fact that no further Licentiates will be available in future, the present senior members of Provincial subordinate Medical and Public Health Services be given accelerated promotion to the Provincial Medical and Health Services.

1. *Misuse of X-Rays.*—This Conference resolves that there is great misuse of X-Ray and Radium Therapy in that no dosages are laid down for India, as has been fixed in other progressive countries. This Conference, therefore, suggests to the Government that an expert committee be appointed to formulate safeguards for our country and suggest the necessary legislation.

20. *Acknowledgments.*—This Conference thanks the Chairman and other members of the Reception Committee, particularly the Organising Secretary, Dr. P. N. Bajpai, and other workers in organising the Conference at such short notice.

This Conference is specially grateful to Sir Padampat Singhania for placing Kamla Retreat, Kamla Club and other buildings and grounds at the disposal of the Conference, Physiology Department, Medical College, Lucknow and Hygiene Publicity Bureau, U.P. We are also grateful to various firms who have helped in making the Conference a success.

21. This Conference thanks Dr. M. Atal for having presided over the Conference, and for having so ably guided its deliberations.

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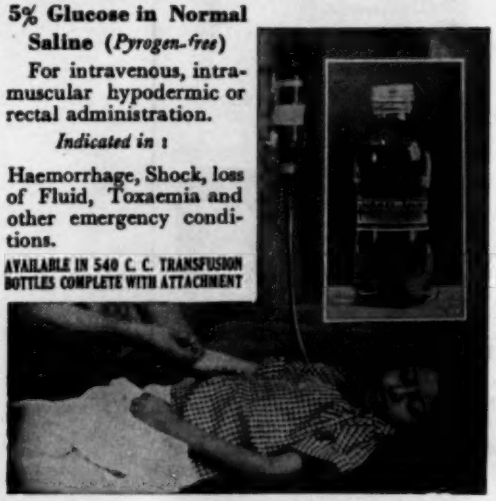

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CONTENTS

Poliomyelitis in Bombay
G. COELHO, M.B.B.S., B.HY., M.R.C.P., F.C.P.S. .. 207
Intravenous Use of Green Coconut Water in Pediatric Practice
—N. G. MOJUMDAR, M.B. (CAL.), D.C.H. (LOND.) 211
Surgical Camps
—B. N. SHARMA, F.V.A.S. 212
Population Problem of India
—S. N. SANYAL, B.SC., M.B. 215
Problem of Tuberculosis in India with Special Reference to B. C. G. Vaccination
—D. C. MAZUMDAR, M.B., M.R.C.P. (LOND.) .. 220
Some Emergencies in Oto-Rhino-Laryngology and and their Treatment
—S. K. NAG CHOWDHURY, M.B. (CAL.), F.R.C.S. (EDIN.), D.L.O. (LOND.) 224

Case Notes:
A New Type of Monster
—R. BANERJEE, B.SC., M.B., F.S.M.F. .. 227
A Case of Abdominal Pregnancy
—S. L. BHALLA 227
Editorial:
Scientific Medicine 229
Notes and News 231
Reviews 233
Correspondence 234
Current Medical Literature 236
Your Questions 240
Supplement xlv

INDEX TO ADVERTISERS

	Page
Aeon Chemical Industries Ltd. ..	xviii
Alembic Chemical Works Co. Ltd. ..	x
Amalgamated Chemicals & Dyestuff Co. Ltd.	xxvii
Antiseptic	xiv
Bengal Chemical & Pharmaceutical Works Ltd. .. Front Cover ..	xxvii, xxxi,
Bengal Immunity Co. Ltd.	xxix
Birla Laboratories	xlvi
Boots Pure Drug Co. (India) Ltd. ..	xxxii
Brahmachari Research Institute ..	xxxiii
British Drug Houses (India) Ltd. ..	xxxiii
Burroughs Wellcome & Co. (India) Ltd.	xxxv
Calcutta Chemical Co. Ltd.	xliv
Calcutta Clinical Research Association Ltd.	iii
Calcutta Polyclinic, Ltd.	xliii
Chas. Pfizer & Co., Inc.	xlv
Cilag-Hind Ltd.	xxx
Cipla Ltd.	iv, xxxvi
Corn Products Co. (India) Ltd. ..	xxxix
Crookes Laboratories Ltd.	viii
Dragon Chemical Works (R) Ltd. ..	xiv
East Asiatic Co., Ltd.	xxvi
Eastern Drug Co. Ltd.	ii, xxxiv
East India Pharmaceutical Works Ltd. ..	xxiv
Fairdeal Corporation Ltd.	xviii
Fisheries Technological Laboratory ..	xlvi
G. D. & Co.	xiv
Glaxo Laboratories (India) Ltd. ..	xiii, xxi
Herts Pharmaceuticals Ltd. ..	xxxvii
Himalaya Drug Co.	xliii
Hind Chemicals Ltd.	xxxviii
Infa Ltd.	xv
I.M.S. Laboratory Ltd.	xxii

	Page
Indian Chemical & Therapeutical Works Ltd.	xii
Imperial Chemical Industries (India) Ltd.	Cover Page 2
Indian Health Institute & Laboratory Ltd.	xli
Indo-Pharma Pharmaceutical Works ..	xvii
John Wyeth & Brother Ltd.	xi, xx
Kodak Ltd.	ix
Lederle Laboratories (India) Ltd. ..	i
Mac Laboratories Ltd.	xvii
May & Baker (India) Ltd.	vi, xxiii
Mayer Chemical Works Ltd. ..	xl
Merck (North America) Inc. ..	vii
Modern Drug House	xliii
Murray & Co.	xlii
Mysore Industrial & Testing Laboratory Ltd.	xlii
Nestles' Products (India) Ltd. ..	xvi
Pasteur Laboratories Ltd. ..	xl
Schweizhind (Overseas) Agencies ..	xxxi
Scientific Indian Glass Co., Ltd. ..	xlii
Scientific Publication Concern ..	xliii
Senco Laboratories	xxxiv
Shanti Trading Co.	xl
Smith Kline & French International Co. (Pharmed Ltd.)	xxv
Sarabhai Chemicals	xxviii
Standard Drug & Chemical Co. ..	xliii
Standard Medical Research Institute Ltd.	xli
T. M. Thakore & Co.	xl
Union Drug Co., Ltd.	xii
Vikram Padamsey & Co.	xxxiv
Worli Chemical Works Ltd. ..	v
Ward, Blenkinsop & Co. (India) Ltd. ..	xix
W. T. Suren & Co., Ltd.	Back Cover

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